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STATISTICAL SURVEY

OF THE

COUNTY OF TYRONE,

WITH

OBSERVATIONS

ON

THE MEANS OF IMPROVEMENT;

DRAWN UP IN THE YEARS 1801, AND 1802,

FOR THE CONSIDERATION, AND UNDER THE DIRECTION

OF

The Dublin Society.

BY

JOHN M'EVOY.

PRINTED BY GRAISBERRY AND CAMPBELL,
NO. 10, *BACK-LANE.*

1802.

23621

TO THE READER.

This REPORT *is at present printed and circulated for the purpose merely of procuring further information, respecting the state and husbandry of this district, and of enabling every one interested in the welfare of this country, to examine it fully, and contribute his mite to its improvement.*

The Society do not deem themselves pledged to any opinion given by the Author of this Survey; and they desire, that nothing contained in it be considered as their sentiments; they have only published it, as the report of the gentleman, whose name is affixed, and they publish it for the comments and observations of all persons, which they entreat to be given freely, and without reserve.

It is therefore requested, that the observations on reading this work may be returned to the Dublin Society, as soon as may be convenient, and which will meet with the fullest attention in a future edition.

DEDICATION.

TO THE RIGHT HON.

LORD VISCOUNT MOUNTJOY.

MY LORD,

WERE your Lordſhip's noble father alive, gratitude and duty would have required that this, my firſt eſſay, ſhould have been offered to his protection. He would naturally have been looked to, as the ſuitable patron for an Agricultural Survey of the County of Tyrone, to which his improvements were ſo ornamental, and in which his character was ſo highly reſpected.

In full confidence, that his virtues will ſtill accompany his fortune, and that what his taſte began, your Lordſhip will bring to perfection,

 I dedicate

I dedicate this imperfect tribute of my reſpect to your Lordſhip's patronage, and have the honour to ſubſcribe myſelf,

With great deference,

Your Lordſhip's moſt devoted

Humble ſervant,

JOHN M'EVOY.

RASH, NEAR OMAGH,
1802.

PRELIMINARY

PRELIMINARY OBSERVATIONS.

A COMPLETE Agricultural Survey of a county of ſuch extent, opulence, and variety, as the county of Tyrone, would require a writer of much general information and ſcientific reſearch. The only qualifications, which the writer of the preſent eſſay can pretend to have brought to his ſubject, are, an acquaintance with agricultural concerns from his earlieſt age, and a local knowledge of the county of Tyrone, obtained from a reſidence in it for many years.

The author had originally intended to have introduced in this work ſome ſketch of the proceſs of the linen manufacture, but this has been anticipated in the Survey of the County of Monaghan, where the ſoil and management are nearly the ſame as in this county.

A botanical arrangement of the indigenous plants has been laid aſide, as a matter of too much magnitude for a work of this kind; but,

at

at ſome future period, the author hopes to lay it before the public in a ſeparate work.

For many valuable hints, as to the mode of drawing up the Survey, and ſuggeſtions of uſeful and important topics, the author returns his grateful acknowledgments to the Right Hon. John Foſter.

What has been ſaid reſpecting Lord Mountjoy's extenſive demeſne and plantations at Raſh, in various parts of this work, it has been ſince thought expedient to bring under one general head, in the form of an Appendix, that the reader, whoſe chief object may be that of ornamental improvements, may have, without interruption, a connected and perſpicuous view of the whole.

SUGGESTIONS

SUGGESTIONS OF ENQUIRY

FOR GENTLEMEN WHO SHALL UNDERTAKE THE FORMING OF

AGRICULTURAL SURVEYS.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

Situation and Extent,
Diviſions,
Climate,
Soil and Surface,
Minerals,
Water.

AGRICULTURE.

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Extent of it, and of each ſpecies of grain ſowed,
Courſe of crops,
Uſe of oxen—how harneſſed,
Nature and uſe of implements of huſbandry,
Markets for grain,
Uſe of green food in winter.

PASTURE,

PASTURE.

Nature of it,

Breed of cattle—how far improved,

——— ———how far capable of further improvement,

Markets or Fairs for them,

General prices,

Modes of feeding—how far houſed in winter,

Natural graſſes,

Artificial graſſes,

Mode of hay-making,

Dairies, their produce,

Prices of hides, tallow, wool, and quantity ſold.

FARMS.

Their ſize,

Farm houſes and offices,

Mode of repairing them, whether by landlord or tenant,

Nature of tenures,

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——— ——— of particular clauſes therein,

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General ſize of fields, or encloſures,

Nature of fences,

Mode of hedge-rows, and keeping hedges,

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GENERAL SUBJECTS.

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State of tithe, its general amount on each article—what articles are exempt, and what charged by modus,

Uſe of beer and ſpirits—whether either or which is increaſing,

State of roads, bridges, &c.

—— of navigations and navigable rivers,

—— of fiſheries,

State of education, ſchools, and charitable inſtitutions,

—— of abſentee and reſident proprietors,

—— of circulation of money or paper,

—— of farming or agricultural ſocieties,

—— of manufactures, whether increaſing,

—— of encouragement to them, and the peculiar aptneſs of the ſituation for their extenſion,

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—— of any improvements which may occur for future encouragement, and particularly for the preſervation of the trees, when planted,

—— of nurſeries within the county and extent of ſales,

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Quantity of bog and waſte ground,

Poſſibility and means of improving it,

Obſtacles to it and beſt means of removing them,

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Weights and meaſures, liquid or dry—in what inſtances are weights aſſigned for meaſures—or *vice verſâ*,

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STATISTICAL

"A Map of the County of Tipperary"
by William Petty, 1602
Map in Map Division

STATISTICAL SURVEY

OF THE

COUNTY OF TYRONE.

CHAP. I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SECT. 1. *Situation and Extent.*

THE county of Tyrone is inland, being bounded by the county of Donegal on the north, and north-weſt; by the county of Londonderry, on the north, and north-eaſt; by part of Loughneagh, and the county of Armagh, on the eaſt; and by the counties of Monaghan and Fermanagh, on the ſouth, and ſouth-weſt.

The county is very irregular, and much pointed and indented in its circumference. The greateſt extent from north to ſouth is from Donnelong, on the borders of the river Foyle, to Slieve-Beaygh mountain, on the borders of the county of Monaghan, being an extent of 33 miles; in Engliſh meaſure-

ment 42 miles. The greateſt length from eaſt to weſt is, from the borders of Loughneagh, in the pariſh of Arboe, in the barony of Dungannon, to the extremity of the pariſh of Farmonomungan, joining the counties of Donegal and Fermanagh, being in extent 43 miles; in Engliſh meaſurement 54.8 miles. Meſſrs. M'Crea's map of the county, made out in 1774, 1775, and 1776, and Dr. Beaufort's memoirs agree perfectly with the above ſtatement.

According to Dr. Beaufort's ſtatement, the accuracy of which we have no reaſon to ſuſpect, the county contains 467,700 acres, and, of courſe, 724 ſquare miles; in Engliſh meaſurement 751,387 acres, being equal to 1163 ſquare miles.

Sect. 2. *Diviſions.*

The principal diviſions are into baronies, namely;

Barony of Strabane, to the north.

——— of Dungannon, to the eaſt.

——— of Clogher, to the ſouth.

——— of Omagh, partly to the weſt; but a large portion of it lies between the baronies of Strabane and Clogher, and meets the barony of Dungannon on the eaſt.

The

The above baronies are divided into parishes, as follows.

The barony of Strabane contains,

1. Donaghedy.
2. Leckpatrick.
3. Caamus.
4. Urney; a small part in Donegal.
5. Ardstra.
6. Upper Bodony.
7. Lower, do.
8. Cappagh.
9. Cumber; only a small part of this in the county.

The barony of Dungannon contains,

1. Lissan, partly in the county Derry.
2. Kildress.
3. Derrylorne.
4. Desertcreat.
5. Artray.
6. Ballinderry, partly in the county Derry.
7. Arboe.
8. Ballyclog.
9. Donaghendry.
10. Clannoe.
11. Tullyniskal, V.
12. Drumglass.

13. Killymon.
14. Clonfeckle.
15. Pomeroy.
16. Donaghmore.
17. Killiſhill.
18. Aughaloo.

The barony of Clogher contains,

1. Donacavey, or the pariſh of Fintona.
2. Clogher.
3. Errigle-Keeran.
4. ——— Frough, V. partly in the county Monaghan.
5. Aghalurcher, partly in Fermanagh.

The barony of Omagh contains,

1. Farmonmaguirk.
2. Clougherny.
3. Dreomragh, or pariſh of Omagh.
4. Dromore.
5. Kilſkeery.
6. Longfield, lately divided into two livings.
7. Farmonomungan.

Total number of pariſhes.

Barony of Strabane. 9 pariſhes.
——— of Dungannon. 18 ———

Barony of

Barony of Clogher. 5 ——
—— of Omagh. 7 ——

39 in the whole.

There are only 35 parishes, properly within the county, as only a small portion of the remaining four parishes are marked within the limits of the map of the county.

Except the parish of Tullyniskal, and the parish of Errigle-Frough, (both marked V. to denote a vicarage) the whole of the parishes are rectories.

Ecclesiastical division.

Belonging to the diocese of Armagh, there are,
160,500 acres.
20 parishes.
19 benefices.
20 churches.
13 glebe-houses.
6 glebes, wanting glebe-houses.

Belonging to the diocese of Derry, there are,
233,100 acres.
11 parishes.
11 benefices.
13 churches.

9 glebe-houſes.
2 glebes, wanting glebe-houſes.

Belonging to the dioceſe of Clogher, there are,
68,000 acres.
4 pariſhes.
4 benefices.
5 churches.
2 glebe-houſes.
2 glebes, wanting glebe-houſes.

The total of acres, in the eccleſiaſtical diſtricts of the county, appear to be 463,700, being 4000 acres leſs than the groſs amount of 467,700, which 4000, I take for granted, are abbey-land, or ſuch lands, as are not ſubject to tythes.

Sect. 3. *Climate.*

The latitude of a place does not always determine the climate; ſo with this county, whoſe main latitude is about 54½.

The great variety of ſoil and ſurface, throughout the county, cauſes a great variation in the climate. Weſterly winds are moſt prevalent the year round; hence follows the great humidity of our air, from being ſituated ſo near the Atlantic Ocean.

Our autumns are generally very wet, and unfavourable to the ſaving of crops of hay and corn. November is ſometimes a favourable month.

It

It is the inconſtancy of the ſeaſons we have moſt to guard againſt; either extremes are never known to be intolerable.

The times of common occurrences in huſbandry are, in a great meaſure, determined by the climate. Oats are ſown from the middle of March to the firſt of May; barley during the whole month of May; flax-ſeed about the ſame time. The hay harveſt, let the weather be never ſo favourable, is generally kept too late.

Sect. 4. *Soil and Surface.*

It would be found an endleſs taſk to enumerate the great variety of ſoils and ſurfaces within the county; the following ſketch may, however, be depended upon.

The mountainy parts are generally ſhallow, wet, and ſour; in other parts dry, huſky, and peaty, the depth ſeldom exceeding ſix inches. In ſome places the ſubſtratum is tenacious, and hence we find the tops and ſides of mountains generally wet and ſpongy. In other parts, the ſubſtratum is a black, ſolid bog, which is equally as tenacious as ſtrong clay ſoil, and of courſe prevents the water from ſinking, by which means the ſurface is equally as bad

bad as in the former caſe. But where the ſubſtratum is open rock, gravel, or any other porous body, through which the water may readily paſs, the ſurface is always dry and wholeſome, and very well calculated for young ſtock in ſummer. Mountains of the latter deſcription are always valuable to the owners, as they get a better price for feeding the ſtock, which are ſent to them generally in May, than thoſe poſſeſſed of land of the two firſt deſcriptions; when the wet mountain lets only at five or ſix ſhillings a *ſum**, the dry mountain claims ten ſhillings, and ſometimes more.

Soils of the foregoing deſcriptions are peculiar to the baronies of Strabane and Omagh; the baronies of Dungannon and Clogher are, generally ſpeaking, of as good a quality of land, as perhaps any in the kingdom. A large tract of the weſt parts of the barony of Dungannon, and of the north part of the barony of Clogher, may be ranked with the mountainy parts of the baronies of Strabane and Omagh.

The

* A phraſe moſt commonly uſed in this county; a cow three years old is a ſum; a two year old and one yearling a ſum; three yearlings a ſum; a horſe is in ſome parts a ſum and a quarter, but is moſt commonly a ſum. A *ſum*, *head collop*, and *ball*, are ſynonimous, according to different countries.

The ſurface of the whole county is wonderfully diverſified, hill and vale being the prevailing character.

The mountains of the greateſt magnitude are in the barony of Strabane. The vaſt chains of the Munterloney mountains, ſtretching into the county of Derry, are the moſt conſiderable; Mullaghcairn, or Cairntogher, with Beſſy Bell, and Mary Gray, and many others are very conſiderable. Mullaghcairn is the higheſt mountain in the county, which I have proved; the next to it is Knockſowel, part of which is in the county of Derry. To the above may be added the mountains of Ballygawley, on the weſt of the barony of Dungannon, and Morley on the weſt of the barony of Clogher.

In order to give the reader a more comprehenſive view of the ſoil and ſurface of the county, I ſhall ſet down Omagh, the aſſize town, as a common centre; and proceed with the principal roads, throughout the county, to the extremities of it. But firſt, I ſhall take a circular courſe, which will include part of the barony of Omagh, the whole of the barony of Clogher, and more than two parts of the barony of Dungannon. In the different excurſions, the crops uſually followed ſhall be remarked, which will, in ſome meaſure, give an idea of the quality of the ſoil.

Between

Between Omagh and Dromore, a diſtance about ſeven miles, the lands are, in general, light and gentle, very much undulated. In many parts the ſoil inclines to a reddiſh colour, a great indication of fertility. Potatoes, flax, and oats, are the principal crops; in ſome ſpots barley; about the town of Dromore, the ſoil is not calculated for the latter. Limeſtone is ſcarce; but as far as lime has been tried, it has been found to anſwer extremely well. Vaſt quantities of aſhes are made from the peaty ſoils, which are in this direction tolerably plenty, though the bogs are not numerous or extenſive.

Limeſtone is not found nearer to Dromore than the pariſh of Longfield, which abounds in that article, but the want of good roads renders it precarious, and of courſe very expenſive.

From Dromore to Fintona, diſtance about five miles, light ſoil; appears extremely well calculated for ſheep, as the ſubſtratum is in general ſand and gravel, which, of courſe, render the ſurface ſound and wholeſome. Crops; potatoes, oats, and flax, or rather potatoes, flax, and oats in rotation, becauſe in few ſituations, in this courſe, flax will not anſwer, unleſs ſown immediately after potatoes, which is almoſt univerſally the caſe in their mountainy ſoils. Two crops of oats in ſuch ſituations are uſually taken off after flax, which is wrong, as the laſt crop is frequently not worth reaping.

Between

Between Fintona and Five-mile-town, diſtance about ſeven miles; about the former, the ſoil is thin and cold, the ſubſtratum much inclined to ſtrong tenacious clay. Near this town, a good plan of cutting out a bog for preſent economy, and future profit, is ſpiritedly purſued by Mr. Eccles, which deſerves particular notice, ſince ſo good a ſyſtem, I believe, is not to be met with in the county, except near Verner's ferry, on the borders of the Black-water, which ſeparates the county of Armagh from this county.

About half way between the above towns is a large mountain called Murley, which makes a great and ſtriking feature in the barony of Clogher. This mountain affords a great capability for improvement, the ſurface being in general a rich peaty ſoil, with a ſubſtratum of reddiſh clay mixed with innumerable ſmall ſtones. To render this mountain profitable, nothing more need be done, than to mix the upper and lower ſoils, which could be performed at little expence, ſince the ſubſtratum lies only at a ſmall diſtance from the peat, or rich moor, the depth of which ſeldom exceeds a foot. Nothing can ſupport this obſervation better than the ſides of the road through the mountain, where the ſoils were mixed in forming the road from the water-tables. The white clover ſprings immediately, with many other uſeful graſſes. This circumſtance is not peculiar to this diſtrict; it is common throughout many

many of our mountains, but the effects are here moſt conſpicuous; though I could not diſcover the leaſt particle of limeſtone-gravel, which abounds in almoſt the whole of the low-lands in this barony, and which I ſhall preſently take notice of.

In the flat country, below this mountain, which is rich and extenſive, the ſoil is capable of producing as good crops as any part of the kingdom; generally a deep ſoil, abounding with limeſtone and limeſtone-gravel, but the latter is but very ſparingly attended to. The general crops are potatoes, barley, oats, and flax, and the rotation of them is moſt commonly as here ſet down, with this difference, that two or three ſucceſſive crops of oats are taken after barley; but here this ſyſtem is more pardonable, than in the ſoils of the county in general. Some patches of wheat are to be met in the barony of Clogher, the culture of which might be extended to a large ſcale, as the ſoils, in general, of this neighbourhood are peculiarly ſuited to that grain.

From Five-mile-town to Clogher, diſtance about five miles; ſoil remarkably good for graſs and corn; abounds with limeſtone and limeſtone-gravel.

From Clogher to Augher, diſtance about two miles; ſoil ſhallow, and inclining to a reddiſh hue; limeſtone ſcarce; crops, potatoes, flax, and oats.

From Augher to Aughnacloy, by Killybrick, &c, diſtance about ſix miles; ſoil ſhallow, inclining to clay, very tenacious; crops, chiefly potatoes and oats, ſome flax,

flax, but not abundant. Though the ſoil about Killybrick and Favoroyal is, in general, cold, wet, and ſhallow, yet timber trees, in general, ſucceed very well. Some patches of barley about Aughnacloy; but this grain is not much favoured by the ſoil of this neighbourhood.

From Aughnacloy to Callidon, diſtance about ſix miles; all gentle ſwells and fertile vales; abundant crops of hay, oats, barley, potatoes, flax, and ſome rye; ſoil inclining to red, and, in many parts, abounding with limeſtone and limeſtone-gravel; ſome marle to be met with in the fertile vales.

From Callidon to Benburb, diſtance about ſix miles along the Blackwater, and on to Blackwater town, which lies principally in the county of Armagh. In moſt part of thoſe diſtricts the ſoils are fertile and well calculated to every kind of grain peculiar to the county, and, perhaps, to the kingdom, if judiciouſly managed. The exertions of Doctor Richardſon, of Clonfeckle, near Blackwater-town, in the line of farming, particularly on green crops, fully ſhew what the fertile ſoils of the major part of the barony of Dungannon are capable of producing.

From Blackwater-town to the Moy, Dungannon, &c. is beautiful and fertile, almoſt beyond deſcription. Every kind of crop ſucceeds well, when the weather is at all favourable, as the fault of a bad crop can never be imputed to the ſoil; I wiſh the ſame obſervation would hold good with reſpect to good management.

From

From Dungannon to Coal-island, and along the canal towards Verner's ferry, &c.; soil in general thin and poor; scanty crops of potatoes and oats.

Again, from Dungannon to Cook's-town, Stewart's-town, &c.; soils in general deep and fertile; generally produce every kind of grain and vegetable, peculiar to the county, in great abundance. Very few hills or mountains of any magnitude are within a considerable distance of Dungannon, particularly in the direction of Cook's-town, Stewart's-town, Tullyhog, &c.

From Dungannon almost the whole way to Six-mile-cross, distance about fifteen miles; almost a continued scene of dreary bog and mountain. And again, from the latter village to within two or three miles of Omagh, an extended flat bog, of several thousand acres, which is supposed to be the most extensive in the county; I am sure it is the most unprofitable, and, from its situation, the most difficult to be improved.

Here ends a circle through part of three baronies. I shall now proceed upon the different roads leading from Omagh through most parts of the county.

From Omagh to Ballygawley, distance about twelve miles; potatoes, flax, and oats; very thin, light soils. The same may be said from Ballygawley to Dungannon, distance about ten miles.

To Augher and Clogher, distance twelve miles; soil and surface nearly the same as on the Ballygawley road, and, of course, so are the crops.

To

To Fintona, diſtance from Omagh about ſix miles; ſoil in general good, dry, and much undulated; produces, in general, good and certain crops.

To Drumquin, Derg, and Clady, the latter about twenty miles diſtance from Omagh. Except within two miles of the town of Omagh, the whole of this courſe exhibits nothing but one continued ſcene of dreary mountain; though the country for ſeveral miles round Drumquin was, not more than forty years ago, very well wooded, the remains of which are ſtill viſible. It is a ſoil, in general, peculiarly adapted for planting, both for aptneſs of ſoil, ſituation, and eaſe in incloſing.

To Newtown-ſtewart, diſtance ſeven miles; the whole way an indifferent ſoil, thin, ſubſtratum ſtrong and tenacious. Much bog and mountain occur in this direction, on both ſides of the river. Between Omagh, and the north part of the demeſne of Raſh, there are large tracts of excellent feeding-land, along the river on either ſides. Except ſome ſpots about Newtown-ſtewart, there is little or no good land along the banks, the whole of the way to Strabane, except ſome trifle on the weſt ſide of the river, near that town. The banks in many parts are ſteep, and of very little value, except for planting, for which purpoſe they are extremely well calculated.

From Omagh to Gortin, diſtance about ſeven miles. Near Omagh a bog of ſeveral hundred acres, which will in time be of great advantage to that town: at preſent

preſent it is in a bad ſtate, but is, however, very capable of being improved, which, no doubt, will ſhortly be the caſe. Good roads is the firſt ſtep towards the improvement of bogs, in which the bog under conſideration is not deficient: ſome excellent roads are made, and others are in contemplation.

The remainder of the way to Gortin, except about two miles through Lord Mountjoy's improvements, is nothing but a continuation of rocky and barren mountain, romantic and pictureſque to the higheſt degree. In moſt of thoſe rocky features there are fertile veins, where timber-trees, ſuch as beech, larch, and Scotch fir, would flouriſh apace.

At Gortin, or rather over the village as you go from Omagh, there is a moſt extenſive view of many of the Munterloney mountains. The village of Gortin may be conſidered the capital of this immenſe region. Before the woods were cut down, the ſcenes about Gortin muſt have been truly pictureſque, and eſpecially the banks of the rivers and brooks, which ſituations the wood chiefly occupied. Very little wood at preſent to be ſeen in this part of the country, except the woods of Carrick, the property of Lord Mountjoy, which are in a very flouriſhing ſtate, and kept in the higheſt degree of preſervation. But to return from this digreſſion;

From Omagh to Green-caſtle, Cook's-town, &c.; almoſt the whole way is bog and mountain. In approaching

proaching Cook's-town, however, the ſoil mends conſiderably, and the magnitude of the mountains diminiſhes. The lands every where about Cook's-town are of a good quality, and produce abundant crops; the town-parks, with the approaches to them from the main ſtreet, are well imagined, and very judiciouſly laid out.

To enter into a minute detail of the great variety of ſoils in this county, would require a large volume; and, after all, perhaps, ſufficient juſtice might not be done in point of accuracy, ſince it is well known, that there are many pariſhes in the county, fully deſcriptive of all I have here endeavoured to explain, and which, I candidly confeſs, is far from the degree of juſtice the ſubject deſerves.

Sect. 5. *Mines and Minerals.*

If, under the head *Mines and Minerals*, we include lime, and other ſpecies of ſtone, we ſhall find this county very rich in many; but as lime and freeſtone are of the moſt general uſe, I ſhall confine my obſervations to them. But, before I proceed any further, I beg leave to remark, that, in making ſurveys of counties, or of large diſtricts, the ſituations of limeſtone quarries ſhould be marked upon the map of the ſurvey.

These remarks might be further extended; good free-stone quarries might be noted, marle, &c. Such observations by the surveyor, which could not take up much time, would be found of great advantage, in pointing out those hidden treasures. Close investigations of those subjects may materially serve to shew the landlord the true value of his property. Many other advantages would result from this kind of speculation, which at present I must omit to set forth, and proceed to shew the situation of some of the principal quarries and masses of lime and free-stone.

In the barony of Strabane, there are the following lime and free-stone quarries, with many others of less note.

At Lisnagir and Lisnacannan, near Lord Mountjoy's demesne, and about a quarter of a mile west of the post-road, are two excellent limestone quarries of great extent, and peculiarly calculated for the improvement of land, of which his Lordship's tenants are thoroughly sensible, since they carry it six or eight miles to different parts of the estate.

Mary Gray mountain, east of the river Struel, and within a mile of the town of Newtown-Stewart, abounds with limestone of a good quality; and the quarry is so circumstanced, that it can never be annoyed by water, which is of singular advantage in the working of any quarry.

The

The Gallions, between Newtown-ſtewart and Douglaſs-bridge, are very rich in limeſtone, which is allowed to be of the beſt quality for building of any in the county.

The above quarries, with others more inferior, are upon the Newtown-ſtewart eſtate, the property of Lord Mountjoy; and alſo two celebrated freeſtone quarries, one at Coſeik, within three miles of Newtown-ſtewart, and the other at Tallynure, on the river Struel, within a ſmall diſtance of the demeſne of Raſh. To the former quarry a great part of the building of Baron's-court, for cut ſtone, was indebted. At Douglaſs, on the eaſt ſide of the Struel, and at the Suine, on the weſt ſide of the ſame river, are excellent freeſtone quarries, capable of being moulded into any ſhape; the latter ſupplied Baron's-court buildings with a great quantity of cut ſtone.

At Ruſkey, within a mile or two of Dunnymanagh, there are immenſe quarries of limeſtone, extending a great length along a rivulet. This chain of limeſtone appears to be connected with the great limeſtone quarry called the Butterloop, in the midſt of the Munterloney mountains, which I ſhall, in another place, have an occaſion to ſpeak of.

In the barony of Dungannon, about Cook's-town and Stewart's-town, limeſtone is in great abundance, and alſo about Dungannon, and in many other parts, particularly at Benburb, whoſe quarries appear inexhauſ-

tible. I have obſerved a chalky ſubſtance to adhere to much of the limeſtone about Cook's-town, which does not render it the worſe for either manure or cement. If the ſtone be broken very ſmall, and applied to land, it is found to anſwer very well without calcination. Here, and throughout a great part of this barony, limeſtone is burned with culm, or ſmall coal, inſtead of turf. At Benburb, culm generally ſells at 18*s.* by the ton, and the lime-meaſure here is thirty-two gallons, which is commonly ſold at 1*s.* 7½*d.* per meaſure roche, or unſlacked.

This barony is by no means deſtitute of freeſtone, which is fully demonſtrated by the towns of Dungannon, Cook's-town, &c.

The barony of Omagh is not very rich in limeſtone; the principal quarries are in the pariſh of Longfield, which are inexhauſtible, as are alſo quarries of freeſtone of an excellent quality. The moſt part of the county is ſupplied with mill-ſtones from the rocky mountains about Drumquin, in this pariſh. Mill-ſtones are ſeldom got in regular quarries in this neighbourhood; they generally are hewn out of ſingle detached rocks. Mountain or grit-ſtone is beſt calculated for mill-ſtones.

About Clogher, and many parts of the manor of Aughentaine, and alſo about Ballygawley, both in the barony of Clogher, are very rich in limeſtone.

Freeſtone

Freeſtone does not appear to be plenty, or of a good quality, in this barony.

Coal.

Coal-iſland, in the barony of Dungannon, is the only part of the county, where coal-works are carried on with any degree of ſucceſs. When I ſaw the colliery in the ſummer of 1800, five pits were working, ſeemingly very induſtriouſly. There is no fire-engine here, nor does it appear, that the works are much impeded by water. There appears, however, to be a great want of encouragement to this buſineſs: the canal at preſent is in a wretched ſtate, choaked up with mud and weeds. The approaches, alſo, to the colliery might be materially improved, of which they ſtand in great need.

Near Cook's-town ſome coals were raiſed; but, from the ſituation, I am apt to believe, they muſt always be attended with much expenſe. Near the town of Dungannon ſome pits were ſunk, and, I believe, ſome years ago much coal was raiſed. Here a fire or ſteam-engine was erected in the ſummer of 1800; a pit was then ſinking in the new town of Dungannon, or very convenient to it, from the ſituation of which there is much to be apprehended, from water annoying the work.

Within

Within two miles of Drumquin, in the barony of Omagh, there appear ſtrong indications of a rich coal-mine, ſituated, I believe, on Mr. Godfrey's eſtate, adjoining ſome church-land belonging to the ſee of Derry. In May 1800, I ſpent ſome time there on ſpeculation.

Tradition ſays, that a water-ſpout had, many years ago, fallen on the ſpot, where the coal now appears; no doubt, deſigned by providence for the good of mankind. Through time, and in conſequence of the impreſſion made by the great body of water, which the *ſpout* produced, a ſmall brook took place, which at this time is ſunk upwards of one hundred feet; ſuch is the yielding quality of the ſoil of the mountain, where this phenomenon was ſuppoſed to have happened.

It appears to me, that ſinking a few pits, or ſhafts, backwards in the mountain, would be the moſt likely way to aſcertain the depth of the ſtratum of coal; and, if the thickneſs of the mine was found ſufficient to be at the expence of following it, inſtead of ſinking ſhafts in the uſual way, the work might be carried on from the face of the bank, at the ſurface of the ſtream, where the coal appears, accompanying the water, in a continued layer, from nine to eighteen inches thick, ſtill encreaſing in thickneſs, as it advances, in a direction nearly horizontal, rather riſing, which is a good omen.

There

There is a large ſcope of the ſtratum viſible, perhaps between three or four hundred feet, before it diſappears. From this circumſtance there is reaſon to ſuppoſe it runs horizontal, or nearly ſo, throughout the mountain, or perhaps throughout all the mountains in this part of the country.

Part of Lough Erne is within eight or nine miles of this place, in a ſtraight line. A canal carried circling round the mountains, in the beſt line for a canal, probably might be double that diſtance.

It is ſaid, that the waters of Lough Erne are higher than the neighbourhood of the coal mine; this, however, might be proved. From the great number of brooks throughout this mountainy country, it is very probable, that a plentiful ſupply of water might at all ſeaſons be procured; but this point ſhould be well aſcertained, before an undertaking of this kind ſhould be ſet on foot,

A perſon, ſkilled in Canal works, might be appointed to take the levels, examine the nature of the ſoil, aſcertain the quantity of water, that might be procured from the rivulets and brooks in the ſummer ſeaſon, with other uſeful points neceſſary to be known. The expence attending all this would be found but trifling, when compared to the many advantages, which might follow from ſuch an undertaking.

There are evident ſigns, of this country abounding in iron ore; and ſuch a colliery as the above, if it ſhould

ſhould be found to anſwer, would, no doubt, encourage the ſearching for mines.

The quality of the coal is excellent, having been tried by ſeveral. I have tried it myſelf, and found it to agree with the favourable reports I have had from others.

The following accounts I have had from Mr. O'Neil, an old reſident of Drumquin, whoſe veracity I have no reaſon to ſuſpect. That ſome years ago he had been examined by Mr. Camac, a well known enterprizing gentleman in the mineral kingdom, reſpecting this buſineſs; that a Scotch engineer had taken the levels, and in ſome meaſure aſcertained the whole expence to be about twelve thouſand pounds, the diſtance of the line, propoſed for the canal, to the neareſt point of Lough Erne, to be about twelve miles; that in a ſevere winter, which happened ſome years ago, and when it was difficult to procure turf, the Rev. Mr. Daniel, of the pariſh of Longfield, uſed the coal in queſtion, in common, throughout his houſe.

Iron Ore.

From the ſulphureous and ferruginous appearances of water in many parts of this county, there is reaſon to apprehend, that iron mines might be procured in large quantities; but the want of the neceſſary fuel for

for ſmelting, either wood or coals, render this article of no value, even if found on the ſurface in ever ſuch large quantities. Canals might, in a great meaſure, remedy this, as by them the ore might be conveyed convenient to coal, ſince wood is out of the queſtion, and of courſe will be ſo for many years to come.

It is commonly reported, that iron ſtones have been found, through the mountains of Munterloney, which have been worked into good iron in common forges; but this wants confirmation.

Clays, ſuch as are uſed for Brick or Pottery.

In treating of ſoils in general, perhaps the article, *Clay*, might be brought in with ſome propriety; but conſidering, how unequal pure clays are to the purpoſes of vegetation, without the aſſiſtance of other ſoils, I preſume a ſeparate diſcuſſion may not be thought improper in this place.

Almoſt every pariſh and town-land affords clay capable of making bricks of various colours, but the pale brick is deemed the moſt durable.

About Fintona, in the barony of Clogher, good flooring and ridge tiles are made; garden pots, and a great variety of crockery ware for country uſe. The beſt pottery in the county, and perhaps in the kingdom, is within a mile of Coal-iſland, on the road to Verner's

ner's ferry, in the barony of Dungannon. Here are manufactured all sorts of rough crockery ware, fire bricks, and tiles for malt and oat-kilns, of as good a quality as any imported.

The clay, before it is baked, is of a dirty white; the best of it is made into small oblong pieces, of about a pound each, which is dried to the sun, and sold on the spot at a penny each. It is used as a substitute for fullers earth, for cleaning leather breeches, &c. For this purpose it is sent to many distant parts, and brings a profitable return.

Sect. 6. *Water.*

There are few counties in the kingdom better supplied with water, than this county. The Blackwater accompanies it for upwards of thirty miles, dividing it from the counties of Monaghan and Armagh for the whole length of that course, and at length falls into Lougneagh at Maghery.

The principal river is nearly central in the county, and goes under various names; the part of it, which lies above, or, to the south of Omagh, and somewhat north of the town, goes by the name of Cammon, or Camann. From thence to Newtown-stewart, it goes by the name of Strael, which appears to be newly coined.

Between

Between Newtown-ſtewart, and Strabane, and ſo on to Lifford, it goes by the ancient name, the Mourne; and from thence forward to Londonderry, by the general name of the river Foyle.

In its progreſs through the county it receives ſome conſiderable rivers, and brooks, or, as they are here called, burnes, innumerable, as every mountain produces its part of a brook, and almoſt all the brooks in the county ultimately join the river Mourne.

At Omagh, or a little to the eaſt of it, two conſiderable rivers meet, namely, Drumragh, and a mountainy river; in the neighbourhood of this junction, I ſuppoſe the name *Cammon* is aſſumed, the word being derived from crookedneſs, or ſudden bends, which here occur frequently. Below Omagh, about two miles, the Poa, or the Fairy water joins. Near Newtown-ſtewart, two conſiderable rivers fall in, namely, the Gortin, and Glinnelly rivers, the junction of which is at Corick woods, about three miles eaſt of Newtown-ſtewart. At Ardſtra, the river Derg joins; and below Strabane near Lifford, comes in the river Fin, which divides this county from that of Donegal, as far as the village of Clady.

The lakes of this county are poor and inſignificant, if we except Loughneagh, which only mears a ſmall portion of it; the lakes at Baron's-court ſeem to be the largeſt, and are by far the moſt intereſting in the county, as being, or compoſing part of the

Marquis

Marquis of Abercorn's demeſne, and which at moſt ſeaſons of the year appear to great advantage.

A ſmall lake at Augher, in Sir William Richardſon's demeſne, is beautiful, and happily circumſtanced. There are ſeveral ſmall lakes, or rather pools, in the baronies of Dungannon, Clogher, and Omagh, but very few in the barony of Strabane; I believe there are not more than two or three in the latter barony; at leaſt, I do not recollect any more.

CHAP-

CHAP. II.

AGRICULTURE.

SECT. 1. *Mode of Culture.*

FROM the great variety of the ſoils of this county, it muſt follow that there are various modes of culture.

I believe there are not better potatoe and flax farmers in the kingdom, than thoſe of Tyrone in general are; the only branches of huſbandry they excel in, or have any pretenſions to. And, though we ſeldom find large tracts of potatoes together, yet we meet with innumerable ſmall patches throughout the county, in many parts almoſt up to the ſummits of the higheſt mountains. This is a ſtrong indication of the populouſneſs of the county.

The ſame obſervation holds good with reſpect to flax, as it is as common for the poor man to have a lot of the latter, as of the former, ſince without both he could not exiſt. It muſt, however, be remarked, that

that there are many mountainy ſituations, which may anſwer for potatoes, where flax would have no chance; in ſuch, oats always follow potatoes, as there barley would not ſucceed. It is an old remark, that, "where barley thrives, flax is ſure to ſucceed after it."

Oats are moſt commonly ſown on one ploughing, which is performed ſometimes before, but moſt commonly after Chriſtmas; but this mode is obſerved only in good barley ſoils, and moſt commonly after it, and ſometimes after flax. In mountainy ſoils, where oats follow potatoes, as has been already obſerved, ploughing never takes place till immediately before the time of ſowing.

Twenty ſtone is the uſual allowance of oats to the plantation acre (I always mean the plantation acre), which generally returns eight barrels, of eighteen ſtone to the barrel. Sixty ſtooks, of twelve ſheaves to the ſtook, are reckoned a good crop for an acre to produce; and, when fodder is at a reaſonable rate, the value of the ſtraw is about thirty ſhillings, but it is moſt commonly higher. The ſtraw is conſidered to be equal to the expence of ploughing, harrowing, reaping, and making up.

As, in good land, flax generally ſucceeds oats, two ploughings are always given; the firſt before or after Chriſtmas, and the ſecond juſt before the time of ſowing. Forty gallons is the uſual allowance for an acre, and one-ſixth leſs for a Cunningham or Scotch acre; the

the latter being the common meaſure, by which the farmers regulate all the land let to poor cottiers, in the *corn-acre* way (a phraſe, uſually underſtood in this country to denote a yearly take, or letting the land only for one crop), though the farmer himſelf may rent his land by the plantation acre. This is a grievance on the poor, which certainly ſhould be redreſſed.

It is very common to ſow flax after barley, when the land is not in good heart; and, in ſuch caſes, the ſucceeding crop is oats, and then the land is ſuffered to reſt for three or four years in a ſtate of nature, moſt commonly without aſſiſtance from graſs-ſeeds of any ſort.

Potatoes are generally planted on lea-land, ploughing for them being very ſeldom practiſed, eſpecially by the poorer claſs; but this practice is chiefly confined to the baronies of Strabane and Omagh, which, I dare ſay, are equal to two-thirds of the whole county. The farmer finds great advantage in giving rough ground to the cottier, who muſt either put up with it, or want. When the land is ploughed, and ſufficiently pulveriſed, the crop is generally double that produced, in the uſual way of planting on the lea. However, though the poor man may be much ſorely diſtreſſed, by being every year obliged to plant rough land at the farmer's option, yet the community at large reap the benefit of it, as land is ſooner gained, and brought into a profitable courſe of cultivation.

The

The induſtry, with which the poorer claſs ſet about collecting manures, is moſt praiſe-worthy; a full account of which ſhall be given in its proper place, under the article *Manures*, which ſee.

Obſervations on the foregoing Section.

In lea ground, two ſucceſſive crops of potatoes would be found of more general advantage than one. To the owner of the land, perhaps, in ſome caſes, one crop only may be more for his intereſt, as he will have, of courſe, more rough ground brought into culture, than he could have by taking off two ſucceſſive crops. If the ſoil be ſtrong, and difficult to pulverize, two potatoe crops ſhould certainly be preferred, without an intervening crop.

But the farmers of this country are remarkably fond of barley crops, as they are always a ready money article; indeed they are frequently bought up by private diſtillers, ſeveral months before they are reaped; this temptation frequently ſuperſedes every other ſolid advantage.

Half the quantity of manure, uſed for the firſt crop of potatoes, will ſerve for the ſecond, and the latter never fail in being moſt abundant; and, if the drill ſyſtem be followed, there will be a great ſaving of ſeed and labour.

By

By following this ſyſtem it is very obvious, that the quantity of food may be conſiderably encreaſed, though not ſo much land may be brought into cultivation in the ſame ſpace of time. I am not, however, perfectly clear, but more grain may be obtained, on account of the good preparation the land will undergo, by taking off two crops of potatoes, than in the uſual way of taking only one crop.

A country may be overſtocked with barley, and it is too frequently the caſe in this kingdom, the effects of which are ſorely felt by the lower claſs, from the immoderate uſe of ſpirits, when it becomes ſo cheap, as to be within the reach of every common labourer. But the caſe is different with reſpect to potatoes; there cannot be too many of them. As long as Britain retains a navy, there will be a demand for pork. Potatoes are not only the food of man, but are alſo that of horſes, cattle, pigs, and poultry; ſheep, alſo, are eaſily taught to eat them.

One great advantage to farmers and labourers may derive from having plenty of potatoes, as, in ſpring, milk and butter is always ſcarce; beef and mutton, at that ſeaſon, are entirely out of the reach of the lower order; pickled pork may be had upon cheap terms, when potatoes are plenty. A pig, killed at Chriſtmas, may go a great way in ſpring, by pickling part of it, inſtead of making bacon of the whole, as is uſually done. A pound of pork, in ſpring,

with leeks, oatmeal, greens, &c. would go further than two pounds of bacon in a family, and would be found conſiderably more nouriſhing.

Sect. 2. *Extent of Culture, and of each Species of Grain ſowed.*

Before I proceed on this ſubject, I beg leave to remark to the Board, that it is my humble opinion, this ſection might be ſomewhat imperfect, without including potatoes in the diſcuſſion; therefore I ſhall take the liberty of giving them a place with the grain.

It is impoſſible to be accurate on this ſubject, without making an actual land ſurvey; and this could only ſerve for one ſeaſon, ſince the quantity of land, under culture, muſt always vary according to circumſtances, ſuch as the encreaſe or decreaſe of population, &c.

Perhaps the beſt method of determining this point is, by attending to Doctor Beaufort's Memoirs, where he ſtates the county to contain 28,704 houſes, which ſtatement at this day is ſufficiently accurate, notwithſtanding the ſuppoſed reduction of the inhabitants by emigration, raiſing militia, &c., which, in the whole, are ſcarce worth attending to. I believe, with many others, that the county is more on the encreaſe than on the decreaſe.

From

From ſeveral views I have taken in different pariſhes, I am clearly of opinion, that the number of perſons, or rather the average to each houſe, is rather over than under ſix; but I ſhall abide by that number, which would make the whole of the inhabitants of the county equal to 172,224.

What remains to aſcertain is, to ſhew what quantity of land is ſufficient to ſupply a family, conſiſting of ſix perſons, the year round. This, from repeated obſervations in ſeveral pariſhes, I have determined ſufficiently accurate to anſwer our preſent purpoſe.

The cultivation, neceſſary to ſupport a family of the above deſcription (no matter whether part be children or not, as children waſte food, and are ſuppoſed to be equal to grown-up perſons), I ſtate as follows:

3 acres of oats;	- Quantity of ſeed,	60 ſtone.
½ ditto, potatoes,	- ditto, -	80 ditto
½ ditto, barley, -	- ditto, -	8 ditto
⅜ ditto, flax, -	- ditto, -	15 gallons
⅛ ditto, garden and haggard.		

4½ total cultivation, which, multiplied by 28,704 houſes, gives, for land in cultivation, 129,168 acres, of which the proportion is;

For oats, - -	86,112 acres
— potatoes, - -	14,352 ditto
— barley, - -	14,352 ditto
— flax, - -	10,764 ditto
— gardens, &c. -	3,588 ditto
	129,168 ditto

The above account ſhews, that a conſiderable deal more than one-fourth of the county is in cultivation; the whole number of acres in the county, according to Doctor Beaufort, being 467,700.

In taking a general view of the county, this great tract of cultivation does not appear to occupy ſo much ſpace, as what in reality is the caſe; the reaſon is, that mountainy and hilly lands meaſure more to the eye, than flats and low ſituations, which are, of courſe, chiefly occupied in culture.

It has been ſhewn, that 3 acres of oats require 60 ſtone of ſeed; 86,112 acres will require 1,722,240 ſtone, or 95,680 barrels, of 18 ſtone to the barrel.

Half an acre of potatoes requires 80 ſtone of ſeed; 14,352 acres, by the ſame rule, will be found equal to 2,296,320 ſtone, or 114,816 barrels, at 20 ſtone to the barrel.

With reſpect to the quantity of land, barley is equal to potatoes, which, at ſixteen ſtone to the acre for ſeed, will be found equal to 229,632 ſtone, or 14,352 barrels, at 16 ſtone to the barrel.

Forty gallons of flax-ſeed are uſually ſown on an acre; 10,754 acres will require 229,632 gallons, or 6,145 hogſheads, allowing 70 gallons to the hogſhead; but this meaſure is never uniform.

The whole may be thus ſtated,

Species.	*Acres.*	*No. of barrels ſowed.*	*Aver. peracre. barrels.*	*Amount. barrels.*	
Oats.	86,112	95,680	7*	602784	*good and bad land.
Potatoes.	14,352	114,816	80	1148160	
Barley.	14,352	14,352	10	143,520	
Flax.	10,764	6145*			* Hogſheads.
Garden, &c.	3588				

Here it may be neceſſary to remark, that the garden and haggard is commonly the ſame, but is always filled with crops in ſummer, moſt commonly cabbage. This part only ſerves to ſhew the quantity of land, counting nothing on the ſeed ſowed, or the produce, as is ſhewn in the ſketch above ſtated.

In the foregoing ſtatement, half an acre of oats is allowed for ſeed, and a ſmall quantity for horſes, whoſe allowance of this article indeed is moſt commonly ſcanty and precarious; four barrels of potatoes are alſo deducted from the produce of the half acre, for an allowance of ſeed for the next ſeaſon; the half acre of barley makes no part of the food of the family, yet ſerves to ſhew the extent of culture and quantity of ſeed ſowed; and the reaſon is, be-

cauſe

cauſe this grain generally follows potatoes; indeed it is always the caſe in good land.

Two and a half acres of oats I place againſt a houſe, or ſix in family; the produce in meal, upon an average, 17½ cwt. allowing 120lb. to the hundred, which for oatmeal is the general ſtandard, being with more eaſe turned into pecks of 10lb. without fractional parts. This allowance will be found nearly one pound per day, to each perſon for the year round.

Thirty-ſix barrels of potatoes* are the common produce of half an acre, after deducting four barrels for ſeed. This allowance in the groſs, to the whole family, will be found better than 4½lb. daily, to each individual. Between meal and potatoes, the daily food for each perſon will be found to exceed 5½lb. which, with the help of the garden in ſummer, may be conſidered an ample allowance. Pigs and dogs, of courſe, muſt fall in for their ſhare; the latter, from their great number, certainly deſtroy more food than the former; but this waſte of food our country rarely conſiders as a grievance. How many pigs might be fed, throughout the kingdom, with the food thrown away upon uſeleſs dogs, which are, by far the greater part, a peſt to the community.

In

* Of 20 ſtone to the barrel; for eaſe in calculation, I prefer the 20 ſtone barrel, though the ſtandard of the county is generally 40 ſtone to the barrel.

In this place it may be neceſſary to remark, that, ſo far as barley immediately follows potatoes, the calculation will hold good; but this is not always the caſe, ſince, in mountainy ſituations, oats muſt neceſſarily follow potatoes; however, in ſome caſes, where the ſoil is very good, it is common to ſow barley after the laſt crop of oats (which ſhall be ſhewn in the next article); but for this, a dreſſing of manure muſt be uſed. This additional crop of barley I ſhall let ſtand, againſt the want of barley crops in mountainy ſituations.

I believe it is ſcarce neceſſary to remark, that very few cottiers are exactly circumſtanced according to the above ſtatement; cottiers, in general, have not a third part of the allowance here ſet down, from the farmers; which ſhall be taken notice of in its proper place; the difference muſt be purchaſed, moſt commonly by the induſtry of the loom.

The quantity of flour uſed, or, which is the ſame, the wheaten bread made uſe of, by the better ſort of people, and particularly in the principal towns, may be conſidered as a draw-back from the above ſtatement; but the very few, who are accuſtomed to wheaten bread, make but a ſmall bulk, when compared to the community at large.

SECT.

SECT. 3. *Courſe of Crops.*

1. Courſe, but not the moſt general is;

1 oats.

2 do.

3 flax.

4 oats.

The above is moſt commonly followed in lands formerly taken in, and which have been allowed to reſt for a few years after the firſt courſe. The ſecond rotation, and ſometimes the third and fourth, is generally the ſame as the firſt. This is a moſt abominable ſyſtem; the land is never ſuffered to reſt any length of time, and the laying down with clover, or any kind of graſs-ſeed, is generally out of the queſtion.

Except about Strabane, and Omagh, very little attention is paid to the laying down with graſs-ſeeds.

2. The following courſe is the moſt univerſal, and is by far the moſt rational, particularly for the baronies of Strabane and Omagh.

1 potatoes, upon lea land.

2 barley, upon one ploughing in April, or May.

3 oats, upon one ploughing about Chriſtmas.

4 flax, upon two ploughings, the firſt about Chriſtmas, and the next immediately before the time of ſowing, which is generally about new May.

5th. Oats,

5th. Oats, and then the land let out for a few years as before. If the land be in good condition, barley generally follows this crop of oats, but the ſoil muſt be highly manured; after this follow oats, and then flax, and ſuffered to reſt as before.

Here are eight ſucceſſive crops running, without any kind of meliorating crop.

There are many however, who follow a better ſyſtem; they ſtop after the laſt crop of barley, by which means the land is let out in good heart, and, of courſe, will come round for a ſecond courſe in a ſhorter time.

To this practice, if the ſowing of graſs-ſeeds and clover, when the latter might be thought to ſucceed, was added, much benefit would certainly enſue.

3d. Courſe, commonly followed in mountainy ſituations.

1 potatoes.

2 oats.

3 oats.

In ſome mountainy ſituations, a third crop of oats is taken off, but this rarely happens.

In boggy marſhy ſituations, a fourth ſyſtem is followed, which I look upon to be the moſt profitable of any.

Part of the ſoil is burned for aſhes, ſufficient to manure a crop of potatoes. Two crops are generally taken off, and then it is laid down, moſt commonly with

black

black oats, which frequently lodge, and rot in wet ſeaſons. Notwithſtanding this, a moſt luxuriant verdure ſoon takes place, without any aſſiſtance from hay-ſeeds; the white meadow graſs (Holcus lanatus), being peculiar to ſuch ſoils, ſoon occupies the ſurface.

This mode of bringing in land has of late years been very much attended to, which the people find to their advantage, in point of gaining annually a conſiderable acquiſition to meadow land, the want of which is the greateſt inconvenience this county labours under.

Obſervations.

If, inſtead of always following potatoes with barley in good ſoils, we were occaſionally to introduce wheat, no doubt we would get into a better habit of living, with reſpect to food, than is at preſent the caſe. The leſſening the conſumption of ſpirits, and the getting into a mode of uſing wheaten, and rye bread, (which ſhould be generally mixed, for the uſe of labouring people) are two objects of great importance to the community. Oatmeal is not calculated for making bread; it is well known, that a pound of it will go farther in a family, made into haſty pudding, or ſtirabout, according to the general phraſe, than a pound and a half made into bread; and yet, notwithſtanding all this, I find there is a conſiderable deal more meal

uſed

uſed in bread throughout the county, than otherwiſe. The people of the province of Leinſter are very ſenſible of this, and, very properly, convert the greater part of their oatmeal into ſtirabout, and uſe wheat and rye, and ſometimes peas, for bread. The foregoing grains are commonly mixed, and, when ſo, are called in ſome parts *brateen*, as in the county of Kildare, and in other parts *meſtin*, as in the county of Louth.

It is ſaid, that the ſoils of this county are not calculated for wheat and rye, and particularly for the former. I know they are not generally ſo, but it is very notorious, that many of them are, from ſome ſucceſsful trials, which have been lately made in the neighbourhood of Omagh, the ſoils of which are by no means deemed ſo well calculated for wheat, as a large portion of thoſe of the baronies of Dungannon and Clogher, which, in my opinion, are as good wheat ſoils as any in the kingdom. A ſtrong abiding loam, inclining to limeſtone-gravel, is allowed, by the beſt judges, to be moſt favourable to wheat, which is in great abundance in the above baronies. In every part of the county are to be found ſpots of rich bog, which produce abundant crops of potatoes. In all ſuch places, rye would certainly ſucceed, after a potatoe crop: but by far the beſt economy would be, to have rape after potatoes, as part of ſuch grounds are in general burned the year before, to manure the potatoe crop. The laſt crop, or that after rape, ſhould be rye.

The

The ſpring is the ſeaſon of ſevere trial for food for cattle: a little rape at that time would be found of infinite uſe, the procuring of which is almoſt in the power of every farmer: the ſeed is of little or no value, and the ſoil is prepared to his hand by the late crop of potatoes.

Wheat and rye ſtraw will laſt double the length of time, for thatch, as oat and barley ſtraw; this would be found of the utmoſt conſequence, in point of encreaſing manure.

From what I have ſaid upon this head, I beg it may not be underſtood, that I wiſh to leſſen the quantity of oats raiſed: if horſes, pigs, and poultry were fully ſerved, the whole would be found little enough, with the addition of the wheat and rye, that might be raiſed.

Sect. 4. *Uſe of Oxen.*

Very little uſe is made of oxen in the county. Some years ago, in Lord Mountjoy's demeſne, oxen were found of great uſe for ploughing deep ſoils, where it was neceſſary to plant, which was performed by the Kentiſh wheel-plough, drawn by ſix bullocks, which commonly were harneſſed by the yoke placed to the ſhoulder of the animal. This ſubject, with many others relative to improvements, I mean to reſerve for a ſeparate

rate chapter, which ſhall include the bulk of the improvements of Raſh * demeſne and its appendages, as it is apprehended, that a curſory view of thoſe extenſive improvements might not do ſufficient juſtice to the ſubject, nor would the reader be able to comprehend them in ſo clear a light, as if brought under one general head.

It is not uncommon, in many parts of the county, to meet, among the farmers, ſmart active little bullocks, employed in the ſlide-car (which ſhall be taken notice of in the next ſection), drawing turf, manure, limeſtone, &c.; and, from the habit of being in company with horſes, they move as faſt as them. It alſo frequently happens with a poor farmer, who may have the misfortune to loſe one of his horſes in ſpring, to be obliged to join a bullock with a horſe to plough his land; indeed there are frequent inſtances of his being obliged to yoke his cow for the ſame purpoſe.

In a mountainy country, as this is, and where the farms in general are ſo extremely ſmall, horſes will always ſuperſede oxen in cultivating the ſoil. In level countries, and where there are large farms, where a long, ſteady courſe of tillage is the principal object, oxen

* Raſh is the preſent name, which is derived from a rath, or Daniſh fort. It is in contemplation to change the name to Mountjoy Park.

oxen can be only employed to advantage.

The common trace and collar is the general mode of harneſſing in ploughing.

Sect. 5. *Nature and uſe of Implements of Huſbandry.*

Very little can be ſaid, in general, in favour of our implements of huſbandry.

The common plough is a moſt wretched implement; it performs very badly, and, from its conſtruction, is very difficult to draw. Inſtead of having the coulter in a line with the land ſide of the ſock, or ploughſhare, it is generally placed an inch nearer the land, or to the left hand; and, inſtead of the coulter being ſet a little before the ſock, it is placed rather behind it, ſo that, by this means, the draught is conſiderably encreaſed. On account of the point of the ſock not being guarded by the coulter, the former is always made of iron, inſtead of metal, which is always attended with trouble and expence. From this mode of fixing the plough-irons, it is plain there are two obſtructions to encounter with, in place of one: the ſock rather opens the land firſt; the coulter cuts after, but never a clear or fair open furrow, which may be eaſily conceived.

Some gentlemen there are, however, who follow a better ſyſtem. A plough got ſome years ago from Collon, one from Lord Longford in the county of Weſtmeath,

Weſtmeath, and one from Mid-Lothian in Scotland (all at Raſh), are beginning to open the eyes of the neighbouring farmers. Theſe acquiſitions, with the ſpirited exertions of Mr. Buchanan, near Omagh, who is moſt indefatigable in the uſeful purſuits of agriculture, I hope will, in a ſhort time, reform our ſyſtem; indeed already there are viſible appearances of a reformation.

Almoſt as little can be ſaid in favour of the harrow, as of the plough. There is only one kind in general uſe; it conſiſts of four baulks or main pieces, containing twenty pins or tines, and is commonly drawn on the angle. Sometimes two harrows are faſtened together, eſpecially in dry weather, and at the time of ſeed-ſowing; in this caſe, two cattle are made uſe of, yoked abreaſt. The ſingle harrow is commonly drawn by one beaſt.

In ploughing, more than two horſes are ſeldom uſed, and, in many ſituations, that number is ſufficient. It is a well-known fact, however, that the ſcanty crops of oats we commonly meet with, and particularly the fourth and fifth in courſe, may be chiefly attributed to ſhallow ploughing. There cannot be a more clear inſtance of this, than what has repeatedly occurred at Raſh, in laying down the ſmall diſtricts occupied by farmers and labourers, who knowing, that they would be obliged to give up at ſtated periods, ſhewed no mercy, but cropped on every year with exhauſting

crops,

crops, of courſe, oats and flax. But, notwithſtanding the extreme poverty, in which they left the land, one deep ploughing, performed by four or ſix ſtout cattle, never failed to yield an abundant crop. But to return;

About twenty years ago, very few wheel-cars were to be met with, except in the neighbourhoods of principal towns, ſuch as Dungannon, Omagh, and Strabane; now every farmer, of any note, is poſſeſſed of one or more; though, in many ſituations, it can never be applied ſo uſefully as the common ſlide-car; notwithſtanding, the farmer, who is able, feels a pride in having a wheel-car, though frequently of not much more uſe to him, than that of going occaſionally to markets or fairs.

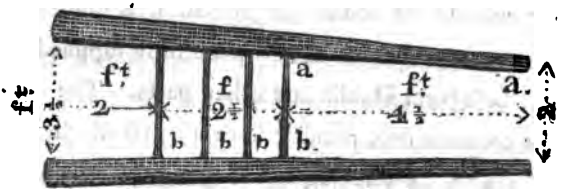
In the hilly and mountainy parts of the country, the ſlide-car muſt always prevail, as being capable of acceſs, where a wheel-car would have no chance of acting. The price is from 3*s.* 9½*d.* to 5*s.* 5*d.* when bought at the fair or market, and it will laſt, with care, three or four ſeaſons, but muſt be frequently ſupplied with new feet, which generally coſt ſixpence-halfpenny a pair: but more of this, when I come to treat of the general prices of timber.

Two and one-half cwt. is generally the load of a ſlide-car, three of which are deemed equal to that of a wheel-car. The whole expence of a wheel-car is about four guineas, which may laſt five or ſix years, according to the manner it may be employed.

To

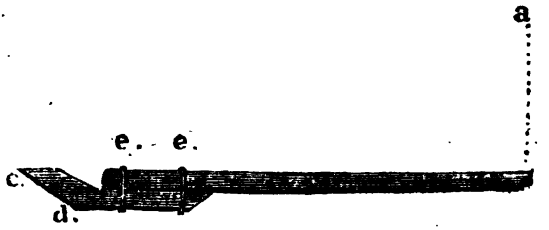
To a perſon, accuſtomed to wheel-cars, the ſlide ones, at firſt view, muſt appear aukward, which, indeed, was the caſe with myſelf ſome years ago; but now I am thoroughly convinced of their great utility in mountainy ſituations. Even in countries not over mountainous, I am not altogether clear, but the ſlide-car ſhould have the preference. It is amazing to find with what celerity a ſmall horſe, worth about forty ſhillings, with one of thoſe ſimple vehicles, will get through ſo much buſineſs in a ſeaſon, in drawing manure, turf, limeſtone, &c. In ſteep hills, rough, uneven, and ſwampy ſituations, the ſlide-car may be uſed, where the other could have no chance to ſucceed. The average expence of a wheel-car, with wear and tear, may be about a guinea a year, whereas that of the other may not exceed half a crown.

The reader, who may not be acquainted with the ſlide-car, even by the name, may conceive ſome idea of it from the following ſketch.



The body, from *a*, to *a*, is uſually the length of that of a wheel-car, according to the ſize of the beaſt; the ſame may be underſtood of the breadth. The body is

made of oak, alder, birch, or any other wood which may be convenient. The rungs, *b*, *b*, *b*, *b*, are generally oak or hazel. The car is commonly uſed for ſome time before the foot is applied, and, upon the application of which, the ſide of the car is thus repreſented.



When the ſhaft of the car is raiſed to *a*, (the ſuppoſed height when the beaſt is yoked), the ſpace *c*, *d*, will be found horizontal, or at leaſt it will take that direction, when the car has been ſome time at work. In drawing over hard ſoils, the feet ſoon wear out, and muſt be frequently replaced. The ſtraps or belts *e*, *e*, are ſometimes of iron, but moſt commonly gads, made of hazel or ſallow.

Spade and Shovel.—Some years ago, ſcarce a good ſpade was to be found; at preſent it is quite otherwiſe, as every town of note is plentifully ſupplied with that article from Dublin and other parts. The ſhovel is the common one, peculiar to every part of the kingdom, which, for ditching and draining, is certainly the beſt.

A mill, for manufacturing ſpades and ſhovels, has been lately eſtabliſhed at Fintona, by Mr. Hugh Kelly of

of that town. I find, from fair trial, that the ſpades are as good as any, which have been brought from other parts. At Newtown-ſtewart, by Mr. Bartin of that town, another ſpade and ſhovel-mill is about to be ſet up.

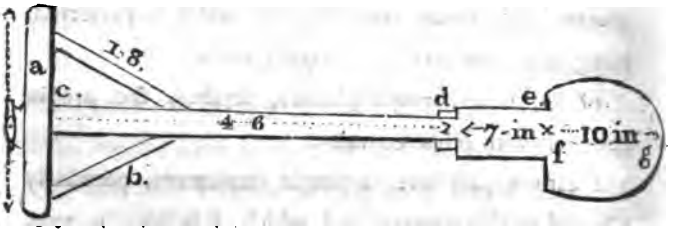
Pick-axe and Crow-iron.—Formerly the pick-axe was ſeldom uſed in ſinking drains and ditches; the crow-iron was the chief implement for that purpoſe. The former is at preſent in moſt general uſe, being leſs laborious to the workman; beſides, in moſt caſes, it is beſt for quick diſpatch. In heavy ſtrong ſoils, and where large ſtones interfere, the latter is preferred, being more powerful for weighty works.

Forks, rakes, reaping-hooks, ſcythes, &c. are in common with other counties.

I cannot paſs over a ſimple implement, peculiarly adapted to this county, and which, I believe, is tolerably general through the North, though not ſo in other parts of the kingdom. The old Iriſh name is *ſkroghoge*; the word *ſkrogh* being generally uſed for ſod. I ſhall here call it a ſcraw-cutter.

It is uſed for cutting ſcraws or ſods, to lay on the houſes, between the wattling and the thatch, which contribute very much to keep them comfortable and warm, and alſo ſaves thatch. The ſods are cut about two feet broad, and from an inch to two inches thick; the length is determined by the depth of the roof; for example, a roof of fourteen feet in depth will require

a ſod of ſixteen feet, as it muſt lap over the vertex, and come down to the outſide face of the wall. They are rolled upon a ſtick, and carried up the ladder by two men, who perform their work very dexterouſly. An active man can cut from thirty to forty ſods of the above dimenſions in a day, and the general price is a penny a ſod, but he muſt aſſiſt to lay them on the roof, and fit them there, which requires ſome degree of ingenuity. Under is a ſketch of the ſcraw-cutter.



The croſs piece *a*, 2 feet,
Brace, *b*, 1 foot, 8 inches,
Length from *c*, to *d*, 4 feet 6 inches,
——— from *d*, to *e*, 7 inches,
——— from *f*, to *g*, 10 inches, and about the ſame in breadth. The riſe, or upſet, from *d*, to *g*, is to be conſiderably more than that of the bed of a ſpade.

SECT.

SECT. 6. *Markets for Grain.*

ALTHOUGH there are ſeveral market towns throughout the county, yet very little grain is ſold at any of them. Oats and barley are generally ſold by ſample. Oatmeal and potatoes are the chief articles of food, ſold in the public markets. The principal markets are, Dungannon, Stewartſtown, Cookſtown, Aughnacloy, Augher, Fintona, Omagh, Newtownſtewart, and Strabane; there are a few others, but of very little note.

Flax-ſeed abounds in every market, in ſpring, not only in market towns, but even in ſmall villages, and detached houſes through the country. It is always bought from the merchant by the hogſhead, which generally is from ſixty to ſeventy gallons; it is retailed by pecks and gallons; five of the latter are ſufficient to ſow half a rood, or twenty ſquare perches of land, being in the proportion of forty gallons to the acre.

Moſt commonly, great profits are made by retailing flax-ſeed; I have known them to amount to forty per cent.

Some years ago, in conſequence of premiums granted by the Dublin ſociety, or the Linen board, large quantities of flax-ſeed of Iriſh growth were ſown; but this practice, with great propriety, has been laid aſide.

SECT.

SECT. 7. *Uſe of green food in winter.*

FEW in the county know what is meant by green food, much leſs have they any knowledge of the application of it.

Some are very induſtrious in planting large quantities of cabbage in their gardens, which they never let go to loſs, as the cows and pigs are ſure to be ſerved by what the family cannot make uſe of; this about Chriſtmas affords a temporary relief. In ſpring which is the trying ſeaſon for cattle, as at that time fodder of every ſort becomes ſcarce, the only reſource for green food, if I may ſo call it, is the tops of furze, which are uſed in large quantities for horſes. The young tops are pounded, or bruiſed, in a ſtone mortar; but this operation is very tedious, as it will take a man, the greater part of the day, to prepare food for two horſes. When bruiſed, they are mixed with a little oats, and make excellent provender, which all our farmers fully experience. A machine, or ſome improvement, upon this head, would be found of infinite advantage to the public. I have ſeen flax broken, for the ſcutchers of a flax-mill, by wooden fluted cylinders, and am of opinion, that furze might be bruiſed on the ſame principle. This might be worth the conſideration of ſome ingenious artiſt.

Inſtead

Inſtead of green food, oat-chaff and ſmall potatoes are boiled together, which are well known to be wholeſome and nouriſhing for cattle and pigs, and never fail to encreaſe the quantity of milk. The milk is alſo encreaſed by boiling hay in water, which encreaſe is more or leſs, according to the quality of the hay; the cloſe jointed graſſes, in general, afford the richeſt hay-water, of which the bent graſſes form not the leaſt part.

There is a ſpecies of graſs very common in all low ſituations, and eſpecially in rich bogs, called the creeping bent graſs, the agroſtis ſtolonifera of Linnaeus: from the ſaccharine and ſucculent quality of this graſs, it is extremely well ſuited for making hay-water. The natives call it the foreen-graſs; the joints are very numerous, and ſtrike root at every one; it creeps along the ſurface to a great diſtance, attaching itſelf to the perpendicular ſides of drains and bog-holes, or any other ſituation, where its numerous roots may chance to graſp. The beſt way of encreaſing it is, to cut the hay with a knife, or rather with a ſtraw-cutter, which if ſown like hayſeeds, in moiſt ſituations, and covered with about half an inch of rich boggy ſoil, in moiſt weather, every joint will ſucceed, as I have more than once experienced.

It is not eaſy to collect the ſeed pure, nor is it apt to ripen well. A fuller deſcription under the article, *Natural graſſes*, which ſee.

It

It would be unpardonable in me, were I to quit this ſubject, without taking notice of Dr. Richardſon's ſyſtem of courſes of crops, and green food, in the pariſh of Clonfeckle, and barony of Dungannon. When I was there in July, 1800, I ſaw ſome crops of rape, managed in a maſterly manner, and with a perfect view towards economy. This gentleman ſeems to poſſeſs, in a great degree, both the ſpirit and talent for uſeful farming.

CHAP.

CHAP. III.

PASTURE.

SECT. I. *Nature of Paſture.*

FROM the mode of letting lands reſt a few years, in ſome meaſure to recover naturally, without the aſſiſtance of clover and hay-ſeeds, or either, good paſture-land cannot be expected. The principal paſtures are thoſe, which the plough and ſpade have not hitherto been able to attack; namely, holmy * land, conſidered too wet and precarious for tillage; rocky and ſkrubby land, out of the reach of a farmer to bring into culture; mountainy ſoil, deemed not capable of bringing crops of corn to maturity; and bog and marſhy ſoils, as far as cattle are able to make their way into them, and, in attempting of which, many are loſt.

The above, with what the cattle may be able to pick up, after the crops of corn are carried off, chiefly compoſe

* Low flat land, ſituated generally in the vicinity of brooks and rivers.

compoſe the bulk of the paſture-land, except about towns, where generally there is ſome attention paid to the ſowing of hay-ſeeds, but rarely clover.

It is a univerſal practice to let in cattle among potatoes, ſome time before the ſtalks are withered. A more deſtructive ſyſtem cannot be conceived, as the loſs in the crop, by adhering to this method, muſt be always conſiderable. The root is never at maturity ſo long as the ſtalk continues green; beſides, the cattle tread the land to ſuch a degree, that frequently a great part of the crop is expoſed, and, if it ſhould eſcape the froſt, is, notwithſtanding, otherwiſe materially injured. The ſoil is alſo rendered ſtiff by the cattle walking over it, which, of courſe, muſt always encreaſe the expence of digging out the potatoes. Add to this, that, if the land be retentive, or inclined to clay, water will lodge in every impreſſion made by the feet of cattle, which, in a ſhort time, will cauſe the crop to rot.

Sect. 2. *Breed of Cattle—how far improved.*

There is very little variation in the breed of black cattle, and eſpecially in the mountainy parts of the county. They are of various colours and ſhapes, but generally ſmall, as heavy ſtock could not ſubſiſt upon the ſcanty fare of our mountains, being principally young

young heath, or *heder*, a common name for heath with the natives, and a coarſe kind of carex graſs, which ſprings up immediately, after burning the heath, in ſpring, which in many parts of the county is a common practice, to the great deſtruction of game, but more particularly grouſe.

The common cuſtom is, with the occupiers of mountainy tracts, to let the graſs for the ſummer ſeaſon, for ſo much a beaſt, or by the ſum, according to the country phraſe, to the inhabitants of the low lands.

Horſes, from 10*s.* to 15*s.*
Cows, from 5*s.* to 10*s.*
Sheep, from 1*s.* to 2*s.*

In Glenchordial, between Omagh and Gortin, one of the appendages of the Munterloney mountains, grazing lets ſomewhat higher, it being allowed to be the beſt feeding mountain in the county.

At the fall of the ſeaſon, generally in October, great numbers of the horned cattle are killed, and ſold in all the country fairs and markets, not by weight, but moſt commonly by hand or view, at from 30*s.* to 3*l.* a carcaſe. By the country people it is called horſe-beef, becauſe it is carried to market on horſeback. The poorer claſs are the general purchaſers, and three or four of them frequently join in a carcaſe. Some are brought home, and fed on ſtraw during the ſeverity of the winter.

From

From this treatment, we cannot expect any improvement in the breed of cattle, ſo far as relates to mountainy paſture, which, indeed, compoſes a great part of the paſture of the county, particularly in the baronies of Strabane and Omagh. Many die, even in the ſummer months, through extreme poverty, and not a few die of diſorders, which, no doubt, proceed from the ſame cauſe.

No pains are taken to improve the breed of cattle, nor would it anſwer any good purpoſe to do ſo, till a reformation be firſt made in the mode of paſture, and more bogs reclaimed, becauſe, in the preſent ſtate of paſture, the native cattle are found more certain, than ſtock brought from the ſouthern or weſtern counties.

Though our milch-cows are far from being well ſhaped in general, they are, notwithſtanding, commonly good milkers, to ſecure which the people take infinite pains. If a perſon happens on a bad milker, he ſells her again as ſoon as poſſible, and ſo continues buying and ſelling, till he finds one to anſwer: this is not attended with much expence or loſs of time, as the fairs are ſo numerous and convenient throughout the county.

The horſes are alſo badly ſhaped, though very durable, and capable of undergoing a great deal of fatigue, upon ſcanty allowance. We ſometimes meet a better kind of horſes, which the farmers ride and work occaſionally, but theſe are generally bought at remote fairs. Fermanagh ſupplies this county with ſome good cattle.

Breed

Breed of Cattle—how far capable of further improvement.

It has been remarked, in the preceding article, that to attempt to improve the breed of cattle, till better paſture be introduced, would anſwer no good end; therefore it is needleſs to dwell on this ſubject. Before any material improvement can be made in ſtock of any ſort, a better ſyſtem of laying down land, with judicious courſes of white and green crops, muſt firſt take place.

SECT. 3. *Markets and Fairs for Cattle.*

PERHAPS there is not another county in the kingdom better ſupplied with fairs than this.

In January there are	11 fairs.
— February -	11 ditto
— March - -	9 ditto
— April - -	6 ditto
— May - -	24 ditto
— June - -	16 ditto
— July - -	9 ditto
— Auguſt - -	18 ditto
— September -	6 ditto
— October -	16 ditto
— November -	24 ditto
— December -	9 ditto
	—— 159 in the year.

Black

Black cattle, ſheep, and pigs, are to be found in every fair, and at all ſeaſons; and in the ſummer months, in the principal towns, new-calved cows and ſpringers are commonly ſold on market days. Sheep are alſo ſold on market days, eſpecially of late, ſince the army began to be quartered throughout the principal towns and villages.

Both fairs and markets are generally ſupplied with the common country breed; but, from Auguſt to the beginning of November, a much larger and better ſort are to be met with in the principal towns; theſe are brought from other parts. In May, wethers are brought from the Weſt by jobbers, which, in a few weeks, are ſold to butchers. This is, in general, a profitable kind of traffic; ſheep of this deſcription, laid in at May for 25*s.*, will ſell out, the Auguſt and September following, at from 32*s.* to 40*s.* beſides the fleece, which may be ſtated at four or five ſhillings more.

Fairs for horſes are much more limited, than thoſe for ſheep and black cattle. The following are the principal.

Strabane.

Moy—conſiderable; good cattle, and high priced.

Dungannon.

Carnteel—conſiderable.

Ballygawley.

Omagh.

Clogher—conſiderable, the ſummer fair only.

Five-

Five-mile-town.
Beraugh.
Dunnelong—conſiderable.

SECT. 4. *General Prices.*

THE price of ſtock varies very much, nor can there be any general rule laid down to aſcertain this point. Forward ſeaſons, and the ſtate of proviſions, are the ſureſt guides to judge by. In very dear ſeaſons, ſuch as the years of 1800, and 1801, milch cows ſold at an immoderate price. I have known ſome of the common breed to rate ſo high as twelve guineas, the milk being of great relief to the poor in thoſe ſevere times; whereas, on the other hand, dry cows brought but a low price, though both ſeaſons were very promiſing, and turned out remarkably well for graſs.

Times of plenty, and the proſpect of a forward ſeaſon, never fail to raiſe the price of dry cattle. A beaſt, ſuppoſed not to weigh more than 3½ cwt. (120lb. to the cwt.) when made up for ſale in November, generally coſts from 5*l.* to 6*l.* the preceding May, though in very poor condition. At 3*d.* a pound for the beef, and about 50*s.* for the hide and fat, the whole may be ſet down at 7*l.* 15*s.*; ſo that, from this ſtatement, unleſs the beef exceed 3*d.* by the pound, the profit cannot be reckoned ſufficient for the ſummer's graſs; but a great

a great deal is made of land by after-graſs, and feeding through ſtubble-land, &c.

Common working horſes are always dear in ſpring, on account of the great hurry of labour, which never fails to prevail at that ſeaſon. A beaſt, which, in the ſpring ſeaſon, might have coſt 6*l.*, probably may be ſold, the October following, for 3*l.* This great variation in the price of horſes ariſes from the ſcarcity of winter food, as very few of the *ſmall farmers* can afford better food, in winter and ſpring, than oat-ſtraw, and the tops of young furze, as has been already noticed.

Common ſheep, bought in at May for 15*s.*, ſell, the October following, at from 20*s.* to 25*s.*; but this muſt be underſtood in good low-land ſoils, and not in mountainy ones; the fleece is generally worth 3*s.* Five ſheep are allowed to a plantation acre. There is more profit on ſheep and lambs, than on wethers, when the lambs ſucceed, which is not always the caſe; the lamb and the wool are ſuppoſed to be cleared, both worth about 12*s.*

Sect. 5. *Mode of feeding Cattle.*

Throughout moſt parts of the county, and particularly the beſt improved parts of the baronies of Strabane and Omagh, black cattle are houſed during the heat

heat of the day in ſummer, merely for the object of encreaſing manure, and not to guard the cattle againſt too much heat, of which there is ſcarcely ever any danger, our ſummers in general being quite the reverſe. This ſyſtem is chiefly confined to milch cows, the young ſtock being generally ſent to the mountains, to remain there the ſummer and autumn half-year.

As the ſtock of grazing among the farmers and labourers is ſeldom abundant, they are very induſtrious and careful to pick up every bit of ſoil they can make out about ditches, &c. Cabbage-leaves and potatoe-ſtalks, as ſoon as the latter article becomes fit for uſe, ſtill help for food and manure, and encreaſe the quantity of milk and butter.

For want of good fences to protect the crops, the cattle are alſo houſed at night; this, of courſe, adds to the fund of manure. With me it is a doubt, if the farmers were even poſſeſſed of ſufficient fences, but they would ſtill prefer the practice of keeping their cattle houſed at night in the ſummer ſeaſon, on account of having an opportunity of encreaſing their fund of manure. Still, however, this conſideration ſhould by no means prevent the introduction of good fences for many uſeful purpoſes, which, in this place, it is not my province to dwell upon.

About towns, where fields and parks are in general ſecurely fenced by dry ſtone-walls or quickſets, cows are ſuffered to lie out at night in ſummer and autumn,

and, in favourable ſeaſons, to the latter end of November.

I have often heard this ſubject talked over by the better informed people, whether it be wiſer economy to have the cattle houſed in the ſummer ſeaſon, as above ſtated, or let them remain out altogether. There might be many reaſons given for and againſt both ſides of the queſtion; but I believe, by weighing all maturely, that houſing is the beſt economy. The other mode, perhaps, in ſome inſtances, might be found beſt, but this ſhould be chiefly underſtood for the neighbourhood of towns; but the misfortune is, that the inhabitants of ſuch places ſcarcely ever pay the leaſt attention to the manure of cattle, by collecting it freſh, ſhortly after it falls from them, and before it becomes too dry, which renders it entirely unfit for the purpoſes of manure. This neglect is the chief cauſe of the numerous rank and inſipid tufts of graſs we meet about towns, and other parts, where this buſineſs is not fully attended to. Some, however, break and ſcatter the dung when it becomes dry, but this is of little or no uſe, as it then becomes quite exhauſted, and the rank tufts are not prevented from taking place.

With reſpect to the feeding of horſes, the ſame advantage, as far as relates to manure, cannot be obtained, as from black cattle, ſince the manner of feeding is more precarious. When not at work, the horſe is generally ſpancelled, or tied by a rope to a ſtake, on the road

road ſide, or in ſome corner of a field under crop. When at work, ſome ſcraps of ſoil are made out for him between working hours, and the ſame commonly at night-time.

Sheep are not uſually fed on the low lands in the ſummer ſeaſon; they are generally ſent to the mountains for ſix months, from the firſt of May to the firſt of November, but, if the weather ſhould ſet in ſevere, not ſo long.

Cattle, how far houſed in Winter.

The weather points out to the people when to houſe their cattle. In order to ſave fodder, which is always a ſcarce article, they keep them out as long as poſſible, or ſo long as the weather will permit Many farmers have their cattle comfortably lodged, both cows and horſes; as to bullocks or oxen, there are but few. In very ſevere weather, the ſmall ſcattered flocks of ſheep are ſometimes looked after, but are moſt commonly ſuffered to range through the country in common, and many of them are utterly loſt.

In very ſevere weather, the young ſtock of black cattle are collected into ſome out-houſes, or ſheltered ſituations, where they are treated as well as the nature of the caſe will allow.

In order to ſave fodder as much as poſſible, the farmer ſeldom threſhes more on one day, than what his

cattle are able to conſume the ſame day; this buſineſs is generally performed by the ſervant boy on mornings and evenings, before and after his day's work.

Whatever little ſtock of hay there may be, is generally reſerved till ſpring, and that chiefly for horſes, who at that ſeaſon muſt work very ſevere, in order to expedite the ſpring buſineſs, which is, in general, very preſſing, between oats, barley, flax, and potatoes.

As to the poor cottiers, who generally derive under the farmers of all denominations, their mode of feeding their cows, in winter, is very precarious and uncomfortable; ſome, according to the rule of cot-take, or cottiers-take, may have half an acre of oats, which commonly produces thirty ſtooks of ſtraw, of twelve ſheaves to the ſtook. Such as are ſo circumſtanced conſider themſelves very well off, though this allowance is not more than half ſufficient for the ſeaſon, as thirty ſtooks of ſtraw ſeldom weigh more than 10 or 12 cwt., and a ton, of either hay or ſtraw, is two ſmall an allowance for a cow, for the ſeaſon. As hay is generally out of the cottager's power, he muſt buy as much more ſtraw as his cot-take produced, otherwiſe his cow muſt ſtarve; the average price of ſtraw is eight pence a ſtook, ſo that ſixty ſtooks, what is ſuppoſed to have off the cot-take, and what he muſt buy, may amount to forty ſhillings; and the ſummer's graſs, unleſs mountainy paſture, is commonly the ſame.

But

But many there are, who are far from being ſo comfortably circumſtanced as the foregoing. Without any kind of a cot-take, but the bare walls of a cabin, frequently without even a ſmall garden, the poor man muſt ſtruggle through life; but almoſt every labourer is alſo a weaver; when the linen trade is good and proviſions cheap, he does tolerably well, ſo far as potatoes and oatmeal are concerned, but is generally ſtraitened for milk and butter; the latter, indeed, the poor ſeldom uſe.

As to the manner of houſing in winter, cottiers' cows generally fare better, with reſpect to warmth, than thoſe belonging to farmers, as one houſe generally anſwers for the family and the cow. Miſerable as this circumſtance is to relate, it is really fact, and will hold good throughout more than the one third of the peaſantry of the county.

Till men of property ſet ſome plans on foot to alleviate the condition of the poor, there can be no chance of improving their ſituations; ſky farmers, or under tenants, who are generally underſtood to be farmers of the loweſt denomination, and are moſt commonly thoſe, from whom moſt of the labourers, and the pooreſt claſs of the weavers hold their cot-takes; what can be expected from a ſet of beings, who are for the greater part fully as wretched as the cottiers themſelves? I find myſelf wandering from my ſubject, but I requeſt the reader's indulgence for a few words more.

A farmer

A farmer, who may occupy ten or fifteen acres, of perhaps bad land, is neither a farmer nor a cottier; he is much worſe ſituated than a cottager, placed in a comfortable, eaſy ſituation, immediately under the lord of the ſoil, with certain privileges, ſufficient to ſupport himſelf, and family, ſo far as relates to potatoes, flax, grazing, and a ſmall garden, with a little hay, or, for want of it, a certain allowance of ſtraw; for theſe the labourer can afford to pay a better rent, than the petty farmer is able to pay for his land. By this ſyſtem, the landed property will be encreaſed, the individual cottier made happy and comfortable; this will excite induſtry, will create wealth; and thus the community at large can never fail of benefiting by this mode.

Sect. 6. *Natural graſſes.*

I believe all the natural graſſes peculiar to the kingdom are to be met with in this county; it is at leaſt the caſe, as far as I could learn. Upon this ſubject, with the inveſtigation of other plants indigenous to the county, I have, for ſome years back, ſpent ſome time and ſpeculation; the reſult of which I hope, one day or other, to ſet forth, though I cannot ſay, that I ſhall be able to add a ſingle ſpecies to the collection at Glaſſnevin, according to the catalogue I have ſeen of that collection.

The

The Feſcue and Poa graſſes are the moſt numerous in ſound ſoils, in which ſituations the vernal graſs is never wanting. In rich reclaimed bogs, both ſpecies of the white meadow graſs always flouriſh, though in any ſoil, newly laid down, they proſper for two or three years; but in dry ſituations they ſoon give way to the above, which, with the white clover, moſt commonly compoſe the principal maſs; but the latter is almoſt peculiar to every ſpot, which in general ſupplies all defects in the verdure of the ſurface, where clay is at all concerned.

According to the received ſyſtem, clover is not ranked among the natural graſſes; but as many of them ſupply the place of the moſt valuable graſſes, at leaſt ſo far as relates to paſture, I ſhall here conſider them in the ſame light, that farmers uſually do.

A perennial clover, in England commonly called cow-graſs, here known by the name of horſe-ſhamrock, is frequently met in detached tufts, in ſtrong ſoils, and cold clays. This is a moſt valuable plant, and ſpreads faſt. Seeds-men frequently impoſe the ſeed of the red clover for this article, which they may readily do, as, by barely inſpecting the ſeeds of both, they are not eaſily diſtinguiſhed, at leaſt by common obſervers. In this county, in dry ſeaſons, the ſeed ripens very well; a few ounces of it might be ſoon collected, which in two or three ſeaſons, by good management

management and clean culture, afford a plentiful ſupply. A ſtock of pure ſeeds might ſoon be procured, by ſeparating the roots.

The famous foreen-graſs, already mentioned as a ſubſtitute for green food, I muſt in this place make a few more remarks upon.

In making roads through our moſt ſpongy and worſt of bogs, we frequently find this ſpecies take place naturally, in the courſe of two or three ſeaſons, in the bottoms and ſides of water-tables and ditches, and along the footways, between the gravel and the edges of the fences. Upon ſcouring thoſe drains and ditches in ſpring, and caſting the ſtuff with the mangled graſs in queſtion upon the ſurface of the bog, we find a ſtrong permanent ſoil ſoon formed. But I find, where this work has been performed early in autumn, that the good effects of ſwarthing over ſooner take place. The reaſon is plain, becauſe a dry ſummer, following the ſpring operation, prevents many of the roots from ſtriking anew. Theſe obſervations, which are really fact, ſhew clearly, how much this ſemi-aquatic graſs might be turned to our advantage, with little trouble or expence. I have frequently known this graſs to ſhoot upwards of twenty feet in a ſeaſon, and produce plenty of roots at every joint, which are always numerous; but in rich bogs, the joints are further apart

than

than in barren bogs, but the whole ſummer's growth, in the former caſe, together with an uncommon degree of luxuriance, is always found moſt conſiderable.

Great advantages might be derived from timothy graſs, by encouraging, and confining it to the ſoil it is beſt calculated for, and where other graſſes of greater repute, though perhaps not deſervedly ſo, would not ſucceed. It is not common; ſometimes, however, we meet it in ſtrong, ſour, clay ſoils, commonly in detached groupes, in which ſituations the ſeed, in favourable ſeaſons, comes to maturity.

Some years ago, I got a conſiderable quantity of this ſeed from America, and ſowed it upon a very ſtiff clay ſoil, which retained water almoſt perpetually, and was ſo ſituated, that draining was found to be of very little uſe; yet, notwithſtanding, the graſs flouriſhed, and is at this day as pure and as free from other graſſes, as the firſt year after the ſeed had been ſown, which is ſo far back as the year of 1792. The ſoil is now perfectly dry and firm, though no ſubſequent draining, or any other improvement of the ſurface, had ſince taken place.

It is very ſingular, that I never have been able to ſave any perfect ſeed from that procured from America, though I have perfectly ſucceeded in raiſing perfect ſeed from the native growth.

Bulk for bulk, the ſeed of this graſs weighs heavier than any of our natural graſſes.

It

It was formerly in great repute in England, from whence it found its way to America, where, I am told, it is considered as one of the moſt valuable graſſes in that country. When better known here, I make no doubt, but it will become a favourite alſo. For working horſes it makes excellent food, but I find it is not over favourable to the dairy.

Sect. 7. *Artificial Graſſes.*

Except red and white clover, I cannot find, that any artificial graſſes have been attempted in this county. White clover is ſometimes ſown ſeparate, but moſt commonly mixed with red clover; but very little of either is raiſed in the county, by way of artificial graſſes; the former ſoon covers the ſurface without being at the trouble of ſowing, and the latter we commonly find in patches, in dry wholeſome ſoils, and ſometimes mixed with the perennial red clover, or cow-graſs, and frequently accompanied with the common trefoil; ſo that there are four ſpecies of clover, generally ranked as artificial graſſes, frequently found growing ſpontaneouſly together, perhaps within the compaſs of one ſquare yard; nor is it uncommon to find more kinds of clover within the ſame ſpace.

Mr. William Roſs, of Strabane, deſervedly merits great applauſe, for his ſkilful management of red and white clovers on a deep bog, which had been cut out.

The

The principal top-dreſſing was ſoaper's-waſte. This uſeful citizen has ſhewn many proofs of his knowledge and good economy in farming and irrigation, or watering of meadow and graſs lands, in the vicinity of Strabane.

Sect. 8. *Mode of Hay-making.*

The ſmall lap-cock, of about ten or twelve pound weight, made up green is the common practice of the county, and alſo of the greater part of the North of Ireland; experience having taught the people, for many years, that the large graſs-cock, generally followed through many parts of the kingdom, is by no means the mode ſuitable to this county, and particularly in wet ſeaſons, which are too frequently ſo at the ſeaſon of the year, that hay is uſually made up here, being ſeldom earlier than the firſt of September, except in new laid down upland, moſt commonly in the vicinity of towns, where manures can be ſpared for meadows. In ſuch ſituations, from the beginning of July to the beginning of Auguſt is the uſual time for hay-making; but in all caſes of managing hay harveſt, this work is never attacked early enough by the common farmers, who are not under the controul of gentlemen, or of ſuch as are better informed than themſelves. There is one reaſon, why the farmers permit their hay-graſs to remain

main ſo long before they cut it; it is this; about the beginning or latter end of April, their ſtock has conſumed the whole of the fodder, the meadows are therefore kept open and grazed, until near the beginning of June, a bad practice; conſequently were the farmer to cut the hay, earlier than the latter end of Auguſt, or beginning of September, the crop would be very ſcanty, theſe months being reckoned for the growth of graſs.—*Remedy*—Let the farmer proportion his ſtock to the quantity of fodder he may have, which I believe is very ſeldom the caſe.

When I firſt ſaw this method of hay-making practiſed in this county, I muſt confeſs, I thought it moſt abſurd, trifling, and tedious; but I was ſoon convinced to the contrary, from a little experience and local knowledge.

The firſt thing to be done, after the hay is mown, is to go over the ſwarth, and collect any weeds that may be, which at that time is eaſily done. In low-land meadows, ruſhes and ſprit are generally the articles moſt injurious to hay; and, as theſe are always longer than the graſs, they project ſomewhat beyond the bulk of the ſwarth, and may be readily ſelected from it. Both ruſhes and ſprit make good thatch, and as that article is always ſcarce, great pains are taken to collect them for that purpoſe. But when ruſhes and ſprit are not over abundant, the farmers are not anxious to collect them, but let them mix with the general maſs; ſome benefit accrues

accrues from the addition of the ſpirit, but none at all from the ruſhes, which dwindle away, before the hay is brought into the haggard. Indeed at beſt hay of this deſcription is only fit for dry cows, and a running ſtock of black cattle. Ruſhes are not ſo good for thatch as ſpirit, the latter being tubulous, and of courſe better calculated to diſcharge rain water than the former, which is pithy.

In collecting the prime part of the graſs, after being mowed, for hay-ſeeds, much attention is ſometimes paid; but this can only take place in the firſt or ſecond crop, after the land has been laid down; for future crops yield but very little ſeed. The white meadow graſſes are always moſt prevalent, and are moſt ſought after. In new laid down grounds of almoſt every deſcription, the white meadow graſſes generally predominate, for the firſt and ſecond ſeaſons, and ſhoot longer than the other graſſes, which gives an advantage in ſeparating them from the general maſs, as they project beyond the bulk of the ſwarth. Of this diſpoſition thoſe, who wiſh to collect the ſeeds pure, avail themſelves, before the ſwarth be broken out or ſcattered. It is tied up in ſmall ſheaves, and placed to dry like ſtooks of corn, till the ſeeds are ripe, and fit to threſh out. So much for economy with reſpect to ſaving graſs-ſeeds, but to return:

The great art, in making hay from natural graſſes, is to break out the ſwarth thoroughly, by hand, and not by the lazy way of toſſing it about with forks, and

forked

ſticks, as is the caſe in the great hay countries in moſt parts of the kingdom. Sometimes the ſwarth is ſuffered to remain for a day, before it be broke out, and ſome let it remain longer; but ſuch, as underſtand this buſineſs perfectly, break out the ſwarth immediately after the mowers, be the ſeaſon dry or wet, unleſs the latter prevails too much, in which caſe the mowers are, of courſe, ſtopped.

In good weather, graſs, cut in the morning, is made into lap-cocks in the afternoon, unleſs it be very heavy forced graſs, in which caſe more time muſt be allowed, and frequent turnings. The ſeaſon always determines the ſize of the cocks; in good weather, they may be about eighteen inches in the baſe diameter, but conſiderably leſs in broken weather. When the weather is very much broken and unſettled, which is, indeed, often the caſe, the cocks are made hollow, ſo as to reſemble a lady's muff, which figure has the power of turning the rain, beſides admitting a thorough paſſage for the air.

If the weather be favourable, the hay will be fit, in a few days, to make up into large cocks, generally about half a ton. It rarely happens, however, that hay can be got up thus ſuddenly, as the ſeaſon for mowing natural meadows ſeldom takes place before the middle of Auguſt, and, too frequently, not till the firſt of September, when, moſt commonly, the autumnal rains greatly retard this buſineſs; in this caſe, the

little

little lap-cocks have always the advantage over every other ſyſtem of hay-making.

It is amazing to find, what ſlavery and hardſhip thoſe cocks will endure, before they are materially injured. I have frequently known them to remain a month together in the lap-cock ſtate, and, after all, to have ſuffered very little.

The whole ſecret is, in making thoſe cocks ſecure at firſt, and forming them into an even convex, to turn the rain with the greater eaſe, and frequently changing their ſituation, without breaking the firſt ſhape given to them, whilſt the graſs was green and freſh. If ever the ſurface be broken, after the lap-cock is firſt made from the freſh graſs, the hay will ſurely ſuffer in bad weather. It is the incruſtation, which the freſh graſs ſoon acquires after being formed into lap-cocks, that ſecures the whole, and in which lies the whole ſecret; and this ſhews how neceſſary it is to lap the hay as ſoon as poſſible after being cut.

In the hay-yard a rick is preferred to a cock, as the expence of thatching is leſs; and, when hay is not cut, but pulled, there is certainly leſs waſte in a rick.

Obſervations.

A prejudiced notion almoſt univerſally prevails throughout the county, and, I believe, through moſt parts of the North of the kingdom, namely, that natural

ral meadow, ſuch as is ſituated along brooks and rivers, &c. ſhould not be mowed till after the dog-days, which may happen earlier or later in the ſeaſon, but are generally conſidered to be between the 1ſt and 20th of Auguſt. This obſervation may ſometimes hold good, but it very frequently happens that, immediately after the dog-days, wet weather commences; beſides, the oat-harveſt uſually takes place about this time, or a little after, ſo that both works interfere at once, which, of all things, ſhould be avoided as much as poſſible, as, in caſe of both meeting, the one muſt certainly give way to the other, and, by ſuch bad management, one, or, perhaps, both, are materially injured, or, at beſt, got over in a ſlovenly manner.

By being contented with one-third leſs hay, and taking a proper advantage of the ſeaſon, ſo as to have the other two-thirds ſecured, before the preſs of the oat-harveſt ſhould take place, would be found by far the beſt economy.

The above evil ariſes from the fodder being conſumed ſo early in the ſpring, which obliges the people to let their cattle have the run of the land, intended for meadow, perhaps to the firſt of June. Green food, in the ſpring ſeaſon, would moſt effectually prevent this diſagreeeble circumſtance.

Sect. 9. *Dairies—their produce.*

As far as I can learn, there is not a dairy in the county, for the public ſale of milk and butter.

The produce is chiefly milk and butter, as very little cheeſe is made, except a little for family conſumption, which is of an inferior quality. Butter, in the ſummer ſeaſon, is to be had freſh in every town and village, moſt commonly at a dear rate, ſometimes ſo high as a ſhilling a pound of eighteen ounces. It is a common practice with huxters and dealers, to reduce the pound of eighteen ounces to ſixteen ounces (the ſtandard), before they retail it to the public. This is a grievance, which might be eaſily remedied by the firſt ſellers, by making their pound only ſixteen ounces, ſince they alone are the ſufferers, and not the conſumers.

All the butter, the farmers can ſpare in the ſummer, is generally made up for winter and ſpring uſe; the produce of the county is generally conſumed within itſelf. The maxim of the common people is, to live on buttermilk in ſummer, and reſerve the butter for winter; this is certainly good economy, but it is not literally followed.

Such part of the milk, when churned, or what is commonly called butter-milk, as can be ſpared from

the family, is generally ſold to labourers and poor weavers, commonly at one halfpenny a quart in ſummer; and beſides, the butter-milk is generally adulterated with water, with which the poor people muſt diſpenſe or want. Many farmers are, however, very liberal in beſtowing part of the butter-milk to the poor.

Vaſt numbers of calves are reared throughout the county, which is the principal cauſe of butter bearing ſuch high prices; a ſecondary cauſe is, the army ſtationed through the principal towns.

Obſervations.

In countries, where milk and butter ſell at high rates, there is no mode, by which a farmer could make more money, than by keeping a public dairy, or rather ſupplying cows, for that purpoſe, to a dairy-man.

In many parts of the kingdom, the farmer ſupplies the dairy-man with a certain number of cows, at ſo much per cow, from the firſt of May to the firſt of November; and, if a cow ſhould not prove to be a good milker, the farmer muſt ſupply a good one in her place. It is a ſettled point between the parties, that each cow muſt give ſo many quarts of milk in the twenty-four hours, diminiſhing, of courſe, as the ſeaſon advances.

Five

Five guineas a cow I conſider a price for the ſeaſon, by which both parties might have very ample profits. This uſed to be the price ſome years ago about Drogheda, when milk and butter were cheaper than at preſent. But, in order to make this ſubject ſomewhat intelligible, I ſhall ſuppoſe five guineas a cow to be a medium throughout the kingdom.

For this purpoſe good graſs, and changes of paſture, ſhould be kept up by the farmer; this, from the nature of the contract, muſt neceſſarily follow.

I ſhall ſuppoſe the cows bought in the beginning of May at ſeven guineas, and ſold out in November at five guineas; in this caſe there is a loſs of two guineas, but the dairyman pays the farmer five guineas, which leaves a clear profit to the latter of three guineas. Now as there muſt be good graſs kept up, as already obſerved, I ſhall ſet down three acres againſt two cows, which ſhews the farmer to be paid two guineas an acre for his land; and, in caſe his rent be twenty ſhillings an acre, it is clear his profit muſt be very conſiderable, even allowing for loſſes incident to all cattle. This immenſe profit may thus be made, without ſcarcely any expence attending it.

I ſhall ſtate the dairyman's return as follows, which I conſider more under than over the true ſtatement, which, in this inſtance, cannot be accurately aſcertained.

	£.	s.	d.
One pound of butter a day, for six months, at 9*d.*	6	16	6
Twelve quarts of butter-milk, as ſtated for butter, a day, at 4*d.*	3	0	8
	£.9	17	2
Deduct five guineas,	5	13	9
	£.4	3	5

I ſhall ſuppoſe the number of cows to be twelve,	50	1	0
One man, and two women, to attend the dairy, I ſhall ſet down at	20	0	0
	£.30	1	0

The farmer's return on twelve cows, 36 guineas,	49	19	0
Dairy-man's return,	30	1	0
	£.10	18	0

From the above ſtatement it appears, that the farmer's profit is more conſiderable than that of the dairy-man; but, upon the other hand, the latter runs no hazard, for, if a cow ſhould die, or meet with an accident in the field, he is not to be the ſufferer.

The farmer has another advantage; he may make ſomething of his land, in the winter months, by ſheep, and a running ſtock of black cattle. But the great point,

point, in favour of the farmer, is, how much his land will be improved by following this ſyſtem.

It muſt naturally occur to thoſe, who might be inclined to purſue this ſyſtem, that the vicinity of towns would be found moſt eligible, on account of the vaſt number of labourers and tradeſmen, who live in ſuch places, without having any means of keeping a cow; as, of courſe, all the town-parks muſt be occupied by the wealthier part of the inhabitants.

Sect. 10. *Prices of Hides, Tallow, Wool, and Quantity ſold.*

Hides.—This article varies very much with reſpect to price. In times of war, hides are always higher than in thoſe of peace. Though this fact may appear ſtrange, from the great quantity of beef, that muſt be exported in the former caſe, yet ſo it is, and always holds good. From this it muſt be inferred, that war encreaſes the value of leather to a conſiderable degree. The price alſo differs according to the weight of the hide; one weighing eighty pounds may coſt at the rate of 40*s.* by the hundred weight; when another, of ſeventy pounds, may coſt only 35*s.* by the ſame weight. The tanners have rules to go by, according to particular weights. A cow-hide ſells generally higher, weight for weight, than that of a bullock.

The

The reader will pleaſe to obſerve, that I mean green or undreſſed hides. The hide of a horſe ſells for very little; it is uſually bought by hand, 5*s.* or 6*s.* being the uſual price for the hide of a middle-ſized horſe. Forty ſhillings a hundred (112lb.) is the medium price for the hides of black cattle in general. Calf-ſkins are generally ſold by hand, from 3*s.* to 5*s.* It is impoſſible to ſtate, with any degree of accuracy, the number of hides ſold in the ſeaſon, ſince the ſkin of every beaſt that may die is diſpoſed of, whether by a regular courſe of ſlaughtering, or by accident, or diſorders. Some years, cattle fall off in greater numbers by diſorders, than in others. The proſpect of a ſcarcity of fodder cauſes a greater number of cattle to be ſlaughtered, than would otherwiſe have been the caſe.

Though there are a great number of ſmall tan-yards in the county, both in towns and country, yet a vaſt quantity of tanned leather is annually brought from Dublin to all the principal towns. The Dublin leather always ſells for a higher price than that manufactured in the county. Some years ago, a great deal of leather uſed to be ſent to Dublin and elſewhere, but this practice is now almoſt given over. The great ſcarcity of tanner's bark is likely to bring the tanning trade into diſrepute. At preſent, almoſt all the bark uſed in the county is imported. Mr. Hamilton's wood, in Munterloney, for many years back afforded the principal ſupply

ſupply of bark, but at preſent thoſe woods are nearly cut down.

Great encouragement ſhould be given for raiſing birch and black ſallow, for temporary relief; the price of the bark of birch and ſallow is half that of oak.

Tallow.—There is leſs variation in the price of this article, than in that of the former, as ſoap and candles are uniformly uſed, both in this and the neighbouring counties, which alſo contribute to regulate the price of tallow.

Tallow at preſent bears a good price, as it has done for ſome years back; the medium price is 3l. per hundred, (of 112lb.) though it is ſometimes ſold by the long hundred (of 120lb;) but either modes make no difference to the ſeller or purchaſer, as the price by the pound is always underſtood. If candles rate at 9d. a pound, tallow uſually ſells at 6½d. per lb. and ſoap in proportion, but the latter is not ſo high as the former, at leaſt the common ſoap is not, but bleacher's ſoap is dearer than the common ſort.

The quantity of tallow ſold depends upon the number of cattle killed, for ſuch as die through poverty produce but very little tallow.

Soap-chandlers are but few, but manufacturers of candles are in every town and village. No regular accounts are kept of the quantity of tallow, or ſuit bought in, ſo that it would be found impoſſible, in this place, to form any accurate ſtatement of the quantity annually ſold.

As far as I can learn, the county is ſufficient to ſupply itſelf with ſoap and candles.

Wool.—Sixteen ſhillings a ſtone may be conſidered the average price for wool, for the laſt ten years; 16lb. being uſually allowed to the ſtone. By retail wool generally ſells at from 14d. to 18d. per pound.

The county is by no means eminent for ſheep, and ſuch as they are, in no great quantity. Small ſcattered flocks are to be met with, in the mountainy parts, in ſummer, which in winter, are diſperſed through the low-lands, without any diſtinction, ſo as not to be confined to any particular diſtrict; for at that ſeaſon, a kind of *run-deal*,* through many parts of the county, (and particularly the baronies of Strabane and Omagh) takes place, for want of good fences. If the owners know the number of their ſheep, and have ſome private mark on them, by which they may be able to diſtinguiſh them from their neighbours', they give themſelves no further trouble about them. In heavy ſnows however, every perſon endeavours to collect his little flock to his habitation, but in this they are often diſappointed.

From the precarious manner, in which ſheep are bred in this county, and as the owners of them gene-

rally

* *Ran-deal*, or *run-deal*, is a term uſed, when ſeveral parties are joined in a town-land, or part of it, without any permanent mearing. Cattle in ſuch ſituations graze in common, but the crops are divided only by a narrow margin, of about a foot broad, left unploughed.

rally manufacture the wool for their own use, it is impossible to form any calculation as to the *quantity sold*. In every fair-town, large quantities of wool, from the west of the kingdom, are to be met with, during the greater part of the summer season, of which no regular entries are ever made, as it is in a great measure sold by retail.

The wool of the country, and all that is brought into it, is chiefly made up into cloth, blankets, and druggets. The farmers, who are in general linen-weavers, consume the greater part of the cloth, and blankets; the druggets are worn by the poorer class of women; the cloth is generally yard wide, and of a very good quality. The people are all expert in dyeing for their own common purposes; they dye various colours, but blue is their favourite.

The labouring part, and the poorest of the weavers, provide themselves with coarse cloth, or rather frize in the country shops; they sometimes buy a cloth called ratteen, which commonly wears well. In the shops also, the poorer class is principally supplied with coarse blankets and stockings, which are chiefly manufactured in Connaught. The county of Donegal supplies large quantities of coarse stockings.

CHAP.

CHAP. IV.

FARMS.

SECT. I. *Size of Farms.*

THE ſize of farms differs very much throughout the county; mountainous farms are generally of great extent, and are ſeldom divided in themſelves, or even from each other. It is common for ſeveral perſons to be concerned in one town-land, in the way of common, or run-dale, as it is uſually called; each perſon to pay a proportion of rent, ſuppoſe a fourth, or a fifth, as the caſe may be; this determines the quantity of land each is to cultivate for his own part; but the cattle run in common, and the number, to the ſhare of each perſon, is alſo determined by his proportion of the rent.

This ſyſtem is attended with many inconveniencies to the land-holder, and is the greateſt impediment to improvements. There is no emulation for draining, encloſing,

encloſing, liming, or carrying into execution any permanent improvements, as long as this ſyſtem exiſts, ſince none of the party have any diviſion, which may be properly called their own. If one perſon ſhould be diſpoſed to improve, another, or perhaps the whole party, may be averſe to it, and thus the buſineſs of improving the farm is dropped altogether.

Among the many clauſes in leaſes, one to oblige tenants to divide their farms muſt certainly be of uſe. I believe there is a law in exiſtence, with reſpect to mearings, which backs an active tenant, if he ſhould be diſpoſed to make up his part of the mearing, though his neighbours ſhould be againſt it. I ſee no reaſon, why an active, enterpriſing man, who may be concerned in the *run-deal* ſyſtem, ſhould not have the law to ſupport him, as that relative to mearings.

Wherever diviſions have taken place among tenants occupying ſuch tracts, improvements are very conſpicuouſly gaining ground, and eſpecially in caſes of long leaſes, or when the tenant has an aſſurance, that his land will be let to him again, at a reaſonable rent, at the expiration of his leaſe.

The low lands of the eſtates of Newtown-ſtewart and Aughentaine, the property of Lord Mountjoy, are in general well divided, and in many parts well planted with thorn quicks, and timber trees. Farms vary in

ſize

ſize from five to fifty acres, and they are much greater in the mountainous parts.

In thoſe eſtates for many years back, leaſes of no more than twenty-one years could be given by the two laſt proprietors; yet, notwithſtanding, the tenants went on with ſpirit and induſtry, in the improvement of their farms; this they did, from a confidence they had in a good old modus, namely, that their land would never be given away to another tenant, ſo long as they were able and willing to pay a reaſonable raiſed rent; this conſideration has had alſo a good effect, with reſpect to dividing the town-lands into ſubdiviſions, ſo as that each individual knew his own part to a certainty. It is now in contemplation to give leaſes of lives and thirty-one years, which, no doubt, will be found a more powerful inducement for the tenants to improve their farms, than the preſent ſyſtem of twenty-one years.

As a ſpecimen of the induſtry of the tenantry of the Newtown-ſtewart eſtate (conſiſting of near twenty-four thouſand plantation acres) perhaps in this place it may not be improper to ſtate the following fact, which I can vouch from my own knowledge.

From 1795 to 1799, both years included, it is well known, that the diſpoſitions of the yeomanry of the kingdom were but very little turned towards improvements, at leaſt by far the greater part of them; yet within the above periods, I have given, from the nurſeries

ſeries at Raſh, upwards of one hundred thouſand foreſt trees, to the tenants of the eſtate, principally oak, aſh, alder, birch, ſycamore, and mountain aſh. The greater part of the above were planted in the faces of new ditches, quick-wiſe, and generally mixed with thorn quicks. The timber trees were in general four years old, being two years tranſplanted, and always cut cloſe after being put into the ditches. A truſty experienced perſon from the demeſne always ſuperintends this buſineſs, to ſee that the plants be ſecurely bedded, moulded, &c.

I mention this circumſtance, in order to ſhew, how little the people of this part of the county were tainted with bad principles. Since the troubles ceaſed, however, they have more than doubled their diligence, in every ſpecies of improvement within their ſphere.

The county may be ſaid to conſiſt of three degrees of farms. The greater part of the baronies of Dungannon and Clogher are compactly divided, from ten to forty acres, and the fences are in general good. Farms of this deſcription never fail from being of the moſt general uſe to the community, becauſe the middle-man* is moſt commonly out of the queſtion, in farms of this deſcription.

The next degree of the ſize of farms is that frequently beyond the reach of the holder to manage, or make

* The middle-man is next the landlord, who lets the land to under-tenants at a rack-rent.

make the moſt of, by fair labour or induſtry. Hence ariſes the baneful practice of taking in under-tenants; no matter how poor, or of what character, provided the middle-man gets his rent; but in this he is frequently diſappointed, and often little lamented. Thoſe wretched under-tenants work the land by repeated cropping, till it is capable of yielding no more; they then generally run away, with whatever ſpoil they can make, moſt commonly a year's rent.

There are ſome inſtances however, where the middle-man may be of more general uſe to the community than the landlord. If the former be poſſeſſed of a long lucrative leaſe, his intereſt in the ſoil may be better than that of the latter; in this caſe he will find it his intereſt to deal reaſonably with ſteady under-tenants. A lord of a ſoil, which perhaps he never ſaw, nor intended ſeeing; with a receiver, who may be alſo a ſtranger to every kind of country buſineſs, and whoſe knowledge is confined to that only of receiving rents, and contriving the beſt ways and means to augment them; are not the moſt likely perſons to promote the general welfare of the community. For this county, it is very fortunate to have but few, if any, of that deſcription.

The third degree of farms are commonly too ſmall. Though this ſyſtem is not altogether ſo deſtructive to the land as the former, yet it is a bar to a regular courſe of induſtry. The man, who holds a few acres,

perhaps

perhaps of bad land, can make no figure as a farmer; his ſituation as a labourer, with a comfortable cottake immediately under the lord of the ſoil, is much preferable, having no difficulties to encounter, nor being under any diſagreeable anxiety.

SECT. 2. *Farm-houſes and Offices.*

THERE is much more attention paid to dwelling-houſes throughout the county, than to the offices belonging to them. In many parts, the dwelling-houſes are built with lime and ſtone; but by far too many are built with clay-mortar as a cement. In the angles of the houſes, jaumbs of doors, &c. lime-mortar is commonly uſed, in order to ſtrengthen the walls; but, notwithſtanding, the walls frequently bulge outwards, wherever clay-mortar is concerned.

In the barony of Dungannon, many houſes are built of clay, or what they call mud-walls, but, in general, in a ſlovenly manner, by no means equal to the mud-wall houſes we frequently meet with in the county of Dublin. When mud-wall houſes are well built, they are much warmer than houſes built of lime and ſtone; they are not, however, adapted for this county, as the clay is not well calculated for the purpoſe of building; but the principal cauſe is, that they conſume too much

much ſtraw for thatch, &c. on which account they leſſen the quantity of manure, a practice we ſhould always guard againſt.

Walls of ſtone houſes are generally built too narrow to ſupport the roof, and eſpecially when the mixed cements are uſed, that is, partly lime-mortar, and partly clay-mortar. The ſide-walls ſeldom exceed twenty-two inches in thickneſs, and the end-walls about two feet. The ſide-walls ſhould be two feet four inches at bottom, and reduced to twenty-two inches at top, which is generally at the height of ſeven or eight feet from the ſurface. The battering, or reduction of the thickneſs of the wall, ſhould be all on the outſide, and the inſide face ſhould be perpendicular; an inch of battering, to every foot in height, is not too much. This is the moſt effectual means to prevent the walls from bulging or ſpreading. The ſame precaution ſhould be uſed in houſes or cabins, when the roof is hipped, or half hipped; but, through the county, the generality of houſes are built with thorough gables.

There are ſome ſlated houſes and offices to be met with in ſome parts of the county, which, from appearances and other circumſtances, are likely to encreaſe. The few already built ſufficiently prove, what ſaving there may be in the article of ſtraw, one-third of which, I dare ſay, is applied to thatching throughout the

the county; but, if flaxing became once univerſal, this quantity would, of courſe, go to encreaſe the fund of manure.

Mode of repairing Houſes and Offices, whether by Landlord or Tenant.

THE repairing of houſes and offices generally falls upon the tenant; there are very few inſtances to the contrary; hence we find buildings in general ſo much out of repair, or repairs done ſo ſlovenly.

Where the tenures are but ſhort, and renewals at all precarious, it cannot be expected that the occupier will be at any great expence, in point of building or repairing houſes; his only object muſt be, how to make the moſt he can of an uncertain tenure.

All the covenants, that may be entered into at the taking out of ſhort leaſes, are of little or no effect with reſpect to buildings. If there are buildings, the enforcing the keeping of them comfortable, or in any kind of decent order, is out of the queſtion; a thouſand excuſes will be made out by the tenant for non-performance, and the landlord has no remedy left, but to turn him out, and, in doing this, he has a chance of loſing part of his rent, and, probably, may meet another not better than the former.

There are only two effectual means of ſecuring comfortable buildings, and, in fact, to have any degree of

juſtice done to farms; namely, long leaſes, or, a certainty of the occupying tenant always having the preference given to him at the expiration of a ſhort leaſe. The ſyſtem of giving long leaſes (ſuppoſe thirty-one years, or three lives) is certainly the beſt mode in this county, as there is ſeldom found that degree of confidence between landlord and tenant, which in England has been ſo happily experienced for ages back, and, in all probability, will be the caſe to the end of time. How happy would be the ſituation of thouſands of our yeomanry, were they upon the ſame footing of many of the Engliſh, in point of good underſtanding between party and party, or landlord and tenant?

In many parts of England, a good old rule is punctually obſerved, namely; one-third of the produce of a farm for the lord of the ſoil; one-third for wear and tear; and one-third for the cultivator of the ſoil. Here we have but few inſtances of this equitable mode.

In England there is nothing more common, than to have no leaſes at all between parties, but only to go on from year to year, and raiſe the rent occaſionally, as the nature of the caſe may be, or ſhall be found agreeable to the parties concerned.

SECT.

Sect. 3. *Nature of Tenures.*

I take for granted, that the information, required on this head, chiefly alludes to cottiers, and the poorer claſs of farmers. Tenures, reſpecting the better claſs of farmers, I ſhall reſerve for the article, *General ſtate of Leaſes.*

The tenures of the cottiers, who derive under the farmers, and are by far the moſt numerous of the labouring claſs, are in general very miſerable, though the greater part of them are weavers, but do not purſue that trade regularly.

The *cot-take* generally conſiſts of half an acre of oats; half a rood, or twenty ſquare perches of flax; from half a rood to a rood of potatoes; grazing of a cow; moſt commonly a miſerable cabin, and bog privilege for turf, from twenty to forty kiſhes, and ſometimes a ſmall garden. Five pounds a year is generally paid for the above. The farmer ploughs the land for oats and flax, and ſometimes puts out the dung for potatoes; and, if he gives the manure, the cot-take is ſeldom leſs than five guineas.

The general rule is, that the labourer pays the farmer in work, inſtead of caſh; and the latter is ſure to make his bargain ſo, as that the ſpring and autumn

ſeaſons muſt be the times of payment. Many of the farmers are weavers of the firſt rate; theſe are ſuch as keep three or four looms in their houſes, and have poorer weavers alſo at work for them; in this caſe, the latter generally pay the former the amount of the cottake in weaving; moſt commonly, part is paid by weaving in the winter ſeaſon, and part by common labour in the ſeaſons already mentioned.

Sect. 4. *General State of Leaſes.*

Twenty-one year leaſes are moſt prevalent throughout the large eſtates; there are, however, many leaſes of other deſcriptions, but very few leſs than twenty-one years, except biſhop's leaſes.

In travelling through the country, the lands, held under long leaſes (ſuch as thirty-one years, or lives, which I conſider long), are eaſily diſtinguiſhed from thoſe of ſhort tenures, from the advanced ſtate of the improvements, ſo conſpicuous in the former. But this obſervation only holds good, where no third perſon is in queſtion, which, indeed, is too often the caſe; as ſuch part of the land, held under rack-rent, can never improve, ſo long as it remains ſo circumſtanced.

A large portion of the county is biſhop's land, ſubject to various modes of renewing leaſes, but all of

ſhort

ſhort tenures; yet, notwithſtanding, we find farmers very comfortably ſettled in well-built habitations, and frequently with ſome planting about them. This chiefly ariſes from the punctuality of renewing, and, probably, from the lands not being over-let, and that the progreſſive riſe is more regular and uniform than in other caſes. But this obſervation is very limited; it holds good ſo far as the tenant holds a complete farm from the biſhop, ſufficient only to ſupport himſelf and family. By far the greater part of biſhop's lands are rented by gentlemen, and opulent farmers, in large tracts; hence, of courſe, the third perſon muſt ſtep in, whoſe fate muſt, in general, be more deplorable, than when circumſtanced under other caſes of rack-rent. In this there can be no redreſs, on account of the ſhortneſs of the tenure; whereas, in caſe of an undertenant deriving under the ſecond perſon, with a long leaſe, he may have ſome chance, becauſe this ſecond perſon has a good intereſt in the ſoil, perhaps a better than the lord of it, which has been already obſerved.

There are inſtances of biſhop's intereſt being purchaſed; I do not know, how far this may tend to alleviate the diſtreſs of the third perſon; it depends, in a great meaſure, on the humanity of the purchaſer.

From hence it is evident, that the improvement of biſhop's lands can never keep pace with their properties, except upon a confined ſcale, as has been remarked.

marked. Glebes, unleſs ſuch as are wholly impropriate, have no better chance than biſhop's lands.

Of particular Clauſes in Leaſes.

It would be found an endleſs taſk to enumerate all the clauſes, inſerted in the leaſes given by the different proprietors of the county. Almoſt every man of landed property has his own particular clauſes. Thoſe in common are the following.

1. A reſerve to the proprietor, and his aſſignees, of all manner of game, and other royalties, mines and minerals, as coals, quarries of all ſorts, ſprings, water, water-courſes, turbaries, and all timber, whether over or under ground.

2. Covenant to do ſuit and ſervice at manor-court, and to grind corn at manor-mill.

3. To join with neighbouring tenants to make ſufficient fences.

4. To make new ditches, and plant trees and quicks.

5. To permit landlord to ſearch for mines.

6. Not to alienate or mortgage, under penalty.

7. To oblige tenants to reſtore to the premiſes all dung made thereon.

8. To exhibit and prove lives in leaſes, to exiſt at ſtated periods.

Innumerable

Innumerable other clauſes might be named; but there is one in particular, which, in my opinion, ſhould be ſcouted altogether, at leaſt from the generality of leaſes. This is the clauſe, which binds the tenant to ſupply *duty men and horſes*, and other *dues*, too ſhameful to mention. Men and horſes are always exacted at buſy ſeaſons, which muſt act againſt the tenant. The loſs of a few men and horſes, in a dormant ſeaſon, might not be much felt; but this is not the object of the landlord, becauſe cutting and drawing home turf, corn, &c. are the works principally laid out to be performed by duty.

I have had many opportunities of obſerving the effects of this kind of duty, and, on the whole, I am certain, that the landlord is rather a loſer, than a gainer, by this kind of dealing. A dinner, and plenty of whiſkey, are generally given upon thoſe occaſions; and, when it is conſidered how little work is done, the balance will moſt commonly be found againſt the landlord. The tenant is generally bound to give ſo many men and horſes, and he will take care to come as late in the day as he can, and work as little as poſſible for the remainder of the day: with him a day's work is the object, and the leſs he does, he looks upon to be the better for himſelf. In ſome caſes, the tenants are bound to perform duty upon a different footing from actual day's work: the landlord muſt have his works, as ſpecified in the leaſe, performed by the tenantry in common,

common, according to the rent they pay; but, let the obligation, or the mode of performing this buſineſs, be as it may, it is always attended to with the greateſt reluctance. The ſooner this *feudal relick* is aboliſhed, the better it will be found for all thoſe concerned; though I am not without apprehenſion, that many of my readers will not join me in opinion.

Inſtead of filling up leaſes with poor inſignificant clauſes, which anſwer no ſubſtantial end, ſome good ſalutary clauſes might be introduced; ſuch as binding the tenant, under a ſevere penalty, to drain, encloſe, lime, marle, &c.; alſo, to attend to certain courſes of green and white crops. Such are the clauſes, by which both parties would ſoon find benefit; and with which, on a certainty of reaſonable leaſes, tenants would chearfully comply.

Sect. 5. *Taxes or Ceſſes paid by Tenants.*

The taxes are; ceſſes for the ſupport of roads, bridges, &c. The ceſs for roads is laid on the barony, to which they belong; other ceſſes on the county at large. Though thoſe taxes are ſometimes conſidered a grievance, yet, in general, they are paid more chearfully than any other ſpecies of tax, both on account of the benefits the public derive from roads and bridges, and alſo the advantage the circulation and return of money is to the tenantry of eſtates, who are always

always the executers of the public works; ſo that the money they pay returns back to themſelves.

Hearth-money and window taxes are always conſidered a grievance among the poorer claſs, and are frequently paid with murmur and diſcontent, as their ideas are, that no future advantage can derive to them for money ſo laid out; they never conſider, that ſuch taxes are for the ſupport of a government, which protects them and their property.

There are other taxes ſettled by acts of veſtry, for the repairs of houſes of worſhip, paying ſextons, &c.; but theſe affect the individual, only in a very ſmall degree.

SECT. 6. *Proportion of working Horſes or Bullocks, to the ſize of Farms.*

WITH reſpect to the proportion of cattle to the ſize of farms, there is no fixed ſtandard or rule. A farm of twenty acres may require as many cattle to cultivate it, as another of fifty acres, according to the quantity of arable land the farm may contain. Few bullocks are made uſe of. Except in large farms, two or three horſes are about the number uſually employed. Very little ploughing is performed till after Chriſtmas, of courſe the fewer cattle are neceſſary. Drawing turf and manure occupies more time in the year, than ploughing. Occupiers of ſmall farms generally

lend and borrow horſes, to and from each other, and eſpecially when the farmer has but one horſe, which in ſmall farms is frequently the caſe.

Sect. 7. *General ſize of fields and encloſures.*

Fields and encloſures vary according to circumſtances. In the vicinities of towns, they are generally ſmall, from one to five acres and upwards.

The nature of the ſituation is frequently (or ſhould be) a guide for the ſize of encloſures; expoſed aſpects require encloſures to be ſmall, the better to ſecure ſhelter, and wet ſwampy land muſt be always improved by ſmall encloſures; at leaſt the expence of draining is leſſened. Theſe are points, pretty well underſtood by the generality of the farmers of this county.

Upon a great ſcale, the beſt improved parts of the county, with reſpect to regular and uſeful encloſures, are the greater part of the baronies of Dungannon, and Clogher.

Between Omagh and Drumquin, for two or three miles from the former; and from Omagh to Dromore; and alſo from Omagh to Fintona, may be ſet down in general, as being well divided, and in ſome parts planted with quick-ſet, but very few foreſt trees. The farmers throughout Lord Mountjoy's eſtate, chiefly in the barony of Strabane, are making rapid ſtrides in

point

point of enclosures, generally small, from one to five acres; and very few enclosures are formed, without being planted with thorn-quicks, and timber trees.

About Cooks-town the enclosures are very regular, and judiciously laid out in town-parks, and upon an extensive scale, which, with many other useful and extensive improvements, reflect the greatest honour on the late and present proprietors.

Sect. 8. *Nature of Fences.*

The nature of fences varies with circumstances, or locality of situations.

In mountanous situations, where stones are plenty, dry walls, badly built, are commonly made use of. Where culture is in question, this mode serves two ends, namely first, by clearing the land of stones, and secondly, for fences to divide it; on this account, if the stones be found very numerous, the enclosures are made small, and the walls very thick, at bottom sometimes four feet, and commonly four feet high. This the farmers consider a cheaper mode, than that of drawing part of the stones away altogether, in which they are perfectly right when over-stocked with stones, which in those situations is usually the case.

When stones are not found sufficiently plenty to form dry walls, sod-walls are introduced, sometimes

When

with a ſtone foundation; the ſods are laid edge-ways, and built about four feet high, and ſometimes topped with furze. Such periſhable walls require to be renewed every ſecond or third year, but this is not conſidered expenſive, as the old ſods mixed with dung, and ſometimes lime, anſwer extremely well for manure for potatoes; and ſometimes as a top-dreſſing for graſs-land.

Bogs and ſwampy ſituations are generally divided from arable land by large drains, ſo as to divide the ſummer paſture, and confine the cattle to the bogs at that ſeaſon; but this mode is chiefly confined to fertile bogs, as ſpungy quaking bogs are ſeldom acceſſible, except in very dry ſeaſons.

The mode of fencing by common ditches is in general very bad; they are ſo ill built, that they frequently tumble down the firſt winter after being built. The dimenſions are always too ſmall, five feet wide, and three feet deep, for the gripe is the general ſize; of courſe, the bank muſt be very poor. For want of an off-ſet,* the thorn quicks, if planted at all, are left quite bare after the firſt winter, and too frequently little pains

*An off-ſet, or ſcarcement, (the latter is the country phraſe) is a ſpace, which ſhould be left between the verge of the gripe, and the face of the bank, from ſix to twelve inches, according to the nature of the ſoil, or the poſition of the ditch.

pains are ever taken afterwards to afford them any relief. About towns however, we sometimes meet with good hedges, which are better attended to than throughout the county at large: this is owing to the narrow scale townspeople are generally concerned in, and the necessity they are under of securing their small concerns, on account of the high rents they usually pay. Though about towns they never attend to the leaving of a scarcement, they notwithstanding, by patience and perseverance, get up the hedge through time; if the ditch should slip or give way, which indeed is almost always the case, they patch up from the bottom of the gripe, with sods, stones, &c. to meet the quick.

Hence it is plain, that for several years there must be perpetual trouble and expense, whereas a reasonable scarcement would have saved both.

When I come to treat of Lord Mountjoy's improvements at large, the article, *fences*, shall be fully treated of, according to the different modes, which were found necessary to be adopted in those extensive concerns.

Mode of hedge-rows, and keeping hedges.

Hedge-rows are rarely met with in this county, and the few, which occur, are but slovenly managed. In most cases they are let to run at random, without taking

taking any pains to manage the trees, by directing their heads to the right or to the left, ſo as to aſſiſt the quick-ſet with a free circulation of air; which is a ſecret our people know nothing of. In ſome caſes the trees have been lopped too ſeverely, and in many inſtances have been pollarded, to the great deſtruction of the timber.

In ſhort there is very little attention paid to the old timber, in hedge-rows, ſcarce as it is. I hope however, it may not be the caſe in future with the young growth, as moſt of the farmers and others, who plant, have got into the habit of planting quick-wiſe, moſt commonly mixed with thorn quicks, inſtead of planting tall, aukward, and ill rooted ſtandards at the backs and tops of ditches, where they are always expoſed to caſtle and other inſults and accidents. As to the keeping of hedges in a neat, garden-like order, either by ſquare or taper clipping, it is quite out of the queſtion, except in ſome particular places, ſuch as about towns, and ſome few farm-houſes of the firſt claſs; but all are attached to the old mode of cutting hedges, which cauſes them to be always bare at bottom. Hedges are ſeldom cleaned more than one or two ſeaſons, after being planted, and then are left to chance.

The precarious manner of procuring thorn quicks, from Dublin, very often of a bad quality, and almoſt always materially injured, by being too long out

of

of ground, with bad packing, and at the mercy of indolent carmen, muſt be always a bar to this improvement, but of this I ſhall ſpeak more fully in another place.

SECT. 4. *Nature of Manures.*

UNDER the article *Mode of Culture*, I have made ſome remarks on common manures, to which I refer.

With reſpect to mixed manure, (a kind of compoſt commonly made up of common dung, mud, or mire, backs of ditches, ſcrapings of ſtreets and roads, and other materials, ſuch as can be collected, and ſometimes lime) the farmers and cottiers of this county are not inferior to thoſe of any part of the kingdom. The abundant crops of potatoes to be met with, in all parts of the county, are convincing proofs of what induſtry is uſed in the various ways and means of collecting manures, becauſe without manures, in our very beſt ſoils, there can be no chance of ſecuring a tolerable crop of potatoes, and the mixed manures are always found the beſt, and if a little lime can be added, it is found ſtill better; but lime alone, without being mixed with other materials, is not found to anſwer for potatoes in moſt caſes; but there have been inſtances of ſtrong old leas, when early ploughed, and roche lime turned in, producing

ing large crops of potatoes, without any additional manure. To anſwer this end moſt effectually, the beſt ſeaſon to plough in the lime is July or Auguſt, and let the land remain in that ſtate till ſpring, when it ſhould be ploughed again, and well harrowed, the better to mix the lime effectually.

The practice of burning moory ſoils, and rich black bog, is univerſal throughout the county, nor did I ever hear of any cauſe of regret from purſuing this ſyſtem, which in this county is very ancient. Excellent crops of potatoes are generally procured by this mode, and that frequently without any other additional manure. Dung and compoſt, however, are moſt frequently mixed with the aſhes, and ſometimes lime, as, in this caſe, corn crops are certain to ſucceed after potatoes, at leaſt one good crop, which would be found uncertain, had the potatoe crop depended upon the aſhes alone.

No manure operates more powerfully the firſt ſeaſon than aſhes, nor is there any ſpecies of manure leſs abiding.

Manuring meadows by irrigation or watering, is finding way faſt through many parts of the county. From the trials which have been already made, and the great benefits reſulting from them, there is every reaſon to hope, that this ſalutary ſyſtem will ſhortly become general.

Conſidering how rich this county is in limeſtone, yet lime, as a manure, is upon a limited ſcale. Binding

clauſes

clauſes in leaſes would, no doubt, remedy this in ſome meaſure. If inſtead of the ſorry lime-kilns, commonly called pot kilns, which we find ſcattered through the county, ſubſtantial draw-kilns were introduced, there would not be the leaſt danger, but that lime would ſoon become a univerſal manure. For many years back, I have had roche lime, from ten pence to thirteen pence a barrel, of thirty-ſix gallons, whereas it is a well known fact, that the farmers, in general, pay from one ſhilling and eight pence, to two ſhillings and two pence, in their peddling way of working their *pot-kilns*.

A lime-kiln of what I call the compoſite kind, or that compoſed of partly an inverted cone, and partly a cylinder, is certainly the beſt conſtruction. The beſt in the county is at Raſh, deſigned ſeveral years ago by the late biſhop of Clogher, which conſtruction has ſince extended to other parts of the kingdom. The dimenſions of the kiln at Raſh are as follows: the conical part eight feet high, and the diameter at bottom about eighteen inches; the cylindrical part of the ſame height as the cone, making altogether ſixteen feet. The diameter of the cylinder, and of courſe the largeſt diameter of the cone, is eight feet. The fuel uſed is turf, and, when well attended, it will turn out about fifty barrels of roche lime, in the twenty-four hours. There is a lime-houſe attached to this kiln, of forty feet by twenty, height of the walls fourteen feet; it is ſlated, and coſt in the year 1791 ſixty guineas. The kiln was built ſeveral years

before, and coſt fifty-ſix pounds. If built at this time, they certainly would come higher. Were I to build another kiln, and that my ſituation could afford it, I would prefer twenty feet, for the whole height, to ſixteen feet, or I would rather have the cylindrical part eleven feet, and the conical part nine feet.

A kiln of this deſcription, when well attended, might afford lime ſufficient for perhaps thirty or forty farmers of the firſt rate. Now ſuppoſe the whole coſt, at this day, might be about two hundred pounds, ſurely this ſum laid on forty large farms, in addition to the rents, could never affect the farmers in any degree, proportionable to the advantages they would derive from always having lime at certain and cheap rates.

In purſuance of an original plan of the late Lord Mountjoy's, a large lime-kiln and lime-houſe are now building in a central part of the eſtate of Newtownſtewart, the object of which is to ſell lime, to the tenantry of the eſtate only, at a reaſonable price, not exceeding fourteen pence a barrel. This cannot fail in obtaining the deſired ends, namely, in enabling the tenant to lay on more lime than what he could, in other reſpects, ever have any chance of doing, and of courſe in raiſing the value of the landed property. The good effects, which may ariſe from this mode, cannot be doubted; they are already ſufficiently proved by a ſimilar practice, followed for ſeveral years back by a neighbouring gentleman, Mr. Stewart of Stranorlar, in the county of Donegal.

Marle

Marle is rather ſcarce in the county, particularly in the baronies of Strabane and Omagh; nor do I find it is a favourite object of the farmers, though I have experienced wonderful effects from it, ſeveral years ago, in the demeſne of Raſh, on a dry ſoil.

Many parts of the baronies of Dungannon and Augher abound with lime-ſtone gravel, yet I find it is not uſed in any proportion, equal to what it ſhould be.

Sect. 10. *Mode of Draining.*

Open drains are in common uſe, only temporary to ſave the crops in moiſt ſituations, when the latter end of the ſpring happen to be wet.

The ſecret of hollow draining is very little underſtood in any part of the county, much leſs the intercepting, or cutting off ſprings. Sod drains are not known in the county.

Some farmers, in forming ditches, take advantage of the ſituation of the ground, ſo as to anſwer a double purpoſe, namely, that of encloſing and draining, but this ſyſtem is by no means purſued ſo fully as might be wiſhed for; it is however gaining ground.

Though, in point of conveniency and regularity, the following the courſes of ſprings with ditches, ſo as to

anſwer the purpoſe of both encloſing and draining, may be conſidered an aukward manner of diſpoſing of the fields and encloſures, yet, in wet and expoſed ſituations, it ſhould be preferred to any regular mode, for the following *good* reaſons. Firſt, draining the land is conſiderably, if not wholly diminiſhed, by the act of encloſing: ſecondly, ſhelter is rendered more complete, by following the natural and meandering courſes of the ſprings: and thirdly, when thoſe ditches are planted with foreſt-trees, the ſhelter is not only more complete, but the whole ſpace, as far as the improvements are carried on, appears a ſolid body of planting from many points of view.

By attending to thoſe natural circumſtances, and planting a few trees in the interſections of fields, which might be always done at very little expence, both beauty and profit would always be the reward of the proprietor.

In general, attention is paid to the draining of fertile bogs, ſo far as they are connected with, or lie convenient to arable land. In ſuch ſituations, immediately at the junction of the bog and arable, the ſoil ſcarcely ever fails to be rich and fertile, and particularly if the arable riſes boldly over the bog. Draining in ſuch caſes is not the great object of the farmer; his aim is manure for his farm, in which he is ſeldom diſappointed. Some more prudently attend to both objects, manure and

and draining the bog below, and, in ſuch ſituations, natural ſprings frequently occur, and are in general eaſily intercepted.

When I come to treat of Lord Mountjoy's improvements at large, I ſhall have an occaſion to enlarge upon this ſubject, that being the only part of the county, where this ſpecies of improvement is carried on to any great extent.

CHAP-

CHAPTER V.

POLITICAL ECONOMY.

SECT. 1. *Roads and Bridges.*

ROADS and bridges are generally well attended to by the gentlemen of the county, many of whom are excellent judges of ſuch public works, and take great pains to have them well executed. Very few counties in the kingdom can boaſt of better or more convenient roads; ſome parts of the poſt road, however, between Monaghan and Strabane are an exception; but thoſe parts are intended to be improved. I have accompanied Captain Taylor, ſome time ago, on the poſt-road between Omagh and Newtown-ſtewart, and then approved very much of the new line he adopted; but ſince having weighed this matter well, I am ſtrongly of opinion, that the propoſed line ſhould be on the eaſt ſide the

of the river, the whole way from Omagh to Newtownſtewart. The limits of this work cannot afford to ſhew my reaſons in this place, but, if called upon at a future time, I ſhall be ready to anſwer; but to return:

Beſides the accommodation of the traveller, and the uſe of roads from town to town, to mills, &c. other objects ſhould be in view. The principal are limeſtone quarries, and the means of being able to get into extenſive bogs, to carry off bog-timber, which at preſent (and it muſt be the caſe for many years) is the chief reſource of the whole country, for cabins, loom-timber, and many other purpoſes.

No ſpecies of improvement could tend more to ſerve the community at large than the above; many thouſands of acres might be limed, which for want of roads to the quarries are given up. The more land is brought into culture, the more difficult it is to get at limeſtone quarries, becauſe the carriage of limeſtone generally takes place in the ſummer ſeaſon. It is univerſally allowed, that limeſtone could be procured twenty years ago, upon much eaſier terms than at preſent, as at that time very little grain or potatoes were in the mountainous parts, to prevent the carriage of limeſtone; hence the great neceſſity of making roads, and the ſooner the better.

All perſons, whoſe property lies convenient to a good limeſtone quarry, ſhould exert themſelves, in having roads conducted, as well as thoſe, on whoſe lands

lands the quarry or quarries are. It ſhould be a general cauſe; they ſhould go further, by cheerfully and unanimouſly contributing to put quarries in good working order; firſt, by giving a power of keeping them dry, when neceſſary; ſecondly, by ſinking ſo as to be able to work upon a fair face to advantage, and, of courſe, by being able to get at the beſt part of the ſtone, which is generally the loweſt in all quarries; and thirdly, by employing intelligent perſons, to ſee that all be fairly carried into execution. Such a perſon might have the general charge of roads for a certain diſtrict, and for dividing and regulating bogs amang tenantry. I ſpeak from conſiderable experience of the utility of ſuch a perſon, and eſpecially where there is a large landed property, and a numerous tenantry.

Without an enumeration of ſome of the principal quarries, I could not, with any degree of accuracy, point out the ſeveral roads, that ſhould be introduced, merely an account of the carriage of limeſtone.

The county is rich in limeſtone quarries, generally of an excellent quality for land. Here I ſhall mention ſome, to which roads would be found of the greateſt advantage.

In the barony of Strabane, between Gortin and Dunnamanagh, is a famous quarry called the Butterloop, ſituated between a cluſter of the Munterloney mountains, and ſome of the firſt magnitude in the county.

county. The greater part of the limeſtone is carried on horſeback in ſmall creels, or cretes, containing about two hundred weight. Roads to this quarry might be made at very little expence, as the materials are always to be found upon the ſpot; and, though the general character of the country for many miles is mountain, yet every *mountain* has its *valley*, through moſt of which roads might be conducted with the greateſt eaſe. It would be for the intereſt of the county of Londonderry, to contribute to a road leading to this quarry, as that county is rather ſcarce in limeſtone, in the part of it, which lies neareſt to this quarry.

Wilmount, within two miles of Dunnamanagh, abounds with limeſtone. Roads from this place into the interior parts of the mountains of Munterloney would be found of great uſe.

Near Newtown-ſtewart are quarries of great extent, to which roads in ſome directions are very much wanted.

Drumquin in the barony of Omagh is very extenſive in limeſtone, and the county for ſeveral miles around it is deſtitute of that article. Roads throughout this whole country would be found of the greateſt advantage.

There are many other valuable limeſtone quarries throughout the county, ſuch as Ballygawley, Cookſtown, &c.

In my different excurſions through the county, I have remarked (and indeed it is invariably the caſe), that

that, where limeſtone is moſt plenty, there the roads are few, and, in general in bad order. Clauſes in leaſes, obliging tenants to contribute towards making roads to limeſtone quarries, under certain rules and reſtrictions, might probably be of uſe; but, if not done in a general way, I doubt it would be found difficult to bring particular individuals to comply. I only give it as a hint.

As to roads in general, much expence and uſeful labour might be ſaved to the public, by farming them; that is, by aſſigning a certain diſtance to one or more perſons to keep in repair, after being firſt ſecurely made. This mode is followed through many parts of England, and, I find, is now practiſed in parts of the barony of Dungannon with good effect.

Throughout the kingdom, roads and bridges always interfere with the two buſy ſeaſons of the year, namely, ſpring and autumn, as theſe are the ſeaſons the judges are on circuit. The labourers, who ſhould be employed in tilling the land, and ſaving the fruits of the earth, are too often taken up in finiſhing off public works, before the judges enter the county.

From this circumſtance is is plain, that much inconveniency and unneceſſary expenſe ariſe; and too frequently the food of man and beaſt is loſt, or much damaged, by not being able to attend to it in due ſeaſon.

If the roads were parcelled out into certain diſtricts at an annual ſum, ſuppoſe ſix pence a perch, more or leſs, as the caſe might require; the farmers, who are likely

likely to be the undertakers, would find it their intereſt to take care, that their public works ſhould not interfere with their private buſineſs, at leaſt, ſo as not to check the ſpring and autumn works. In this caſe they would prepare materials occaſionally, and have them in readineſs to lay on at every favourable opportunity.* By ſuch judicious management much advantage would accrue to the public, and we would ſeldom find bad ſpots in roads, which in the preſent caſe too frequently occur. Road-overſeers, (I mean the under ones) according to the preſent mode, never find it their *own* private intereſt to attack a breach in a road, or ſet right a pipe or a gullet, which may have got out of order, or let off water from ditches or water-tables, or to do any other trifling matter that may occur, and which if early attacked, the coſt is nothing in compariſon to the letting ſuch jobs lie over from aſſize to aſſize.

The farming of roads &c. would remedy all thoſe inconveniencies, becauſe, the moment the undertaker found any thing amiſs, it would be his intereſt to ſet it right immediately,

* Soldiers ſtationed in different quarters might be applied to great advantage, to make and repair roads in time of peace; the good effects of which have been long ago experienced in the highlands of Scotland. The farmer by this means might be eaſed of the weight of county ceſs; the ſoldiers would have more pay than uſual, and, what would be found better, his time would be better employed than in the dram ſhop; the military road, in the county of Wicklow, may ſerve as a rule to go by.

immediately, as the laying out of money in due ſeaſon is always found the cheapeſt way of going to work.

It would alſo be found good policy to allow the farmer or undertaker that part of the road, which may lie next to his own land; by which means, he would be the more induſtrious to clear his ground of ſtones, which to him would be a deſirable advantage, and of general benefit to the public, ſince the more land is cleared, the greater, of courſe will, be the extent of culture.

There is no reaſon, why a new road ſhould not be contracted for in like manner. In all caſes, inſpectors are abſolutely neceſſary. An active perſon employed in this manner, of approved judgment and fidelity, would do away at once petty road-overſeers, and would not be attended with perhaps one fifth of the expence; as the former might anſwer for a whole barony, at ſuppoſe twenty pounds a year, which would make only a ſmall figure in paying the number of overſeers uſually employed in the ſame diſtrict.

Contracts of this nature ſhould not be for a leſs term than ſeven years, to keep roads in repair; if only for one or two years, contractors will have no permanent intereſt in the work, and of courſe they will not take ſuch pains to do it well, as if the terms had been longer. Indeed, the longer the term of contract is, the better; it acts upon the contract or in the ſame manner as a long leaſe does on a farmer, which requires no demonſtration.

How

How far the country might be enriched by introducing more roads is evident, not only from the uſeful purpoſe of cheapening the carriage of limeſtone, but alſo the great advantage of being able to procure bog timber at a much cheaper rate than the preſent.

Extenſive bogs we find richer in timber than ſmall ſcattered patches, and the great bogs invariably afford more bog-fir than bog-oak, the former being of three times the value of the latter. It is alſo found, that timber is in larger quantities in the middle of large bogs, than at the edges; hence the neceſſity of making roads quite through them.

I have been often an eye-witneſs to ſcenes of ſtruggling and great fatigue in getting out logs of timber to the hard land, frequently at the diſtance of a mile from where the bog was found. Roads would certainly cheapen this buſineſs, not to mention the many other advantages, that would naturally follow the introduction of them. It is in vain to ſet about reclaiming extenſive bogs, without firſt forming roads, and making large drains and water-tables. A bog may be drained in ſome meaſure, but how are hard materials for covering them to be brought in, without roads?

Under this head, I beg it may be underſtood, that I principally allude to flat extended tracts of red ſpongy bog, moſt commonly in a floating ſtate, which, of all ſpecies of bogs, are the moſt difficult to improve; but more of this under its proper head.

Before

Before I diſmiſs this ſubject, I ſhall beg leave to ſuggeſt to the gentlemen of the county of Tyrone a plan, which, I apprehend, might not be attended with much expenſe. They are now in poſſeſſion of the map of the county, made out by Meſſrs. William and Conyngham M'Crea, in the years 1774, 1775, and 1776.

Since that time, a great number of roads have been made throughout the county, all of which are uſeful, and many of them materially ſo. In order to render this map more complete, I apprehend, that all the roads, which have been introduced ſince it was finiſhed, might be ſurveyed, and laid down upon it. When this part of the work ſhall be completed, the gentlemen may go further; a copper-plate might be made out, and a great many impreſſions ſtruck off. The plate ſhould be the property of the ſubſcribing gentlemen, and any new lines, that may be introduced hereafter, might be delineated on the plate, and thus have new impreſſions made out occaſionally.

I am informed, that artiſts will agree to make out the engraving, and ſtrike off the maps, by allowing them a certain number for their own emolument. The certainty of this may be eaſily known, by applying to any of the eminent print-ſellers.

Bridges.

A great miſtake in bridge-building is, that the piers and abutments are not well attended to, in having them

them ſunk ſufficiently deep. More bridges, pipes, and gullets have given way through this cauſe, than through all other cauſes put together. In clayey and ſandy ſituations, the courſe of the river or brook is perpetually changing; therefore too much precaution cannot be taken to guard againſt accidents, that frequently ariſe from ſuch cauſes. Where the current is rapid, there the more care ſhould be taken in ſinking deep; but ſuch ſites for bridges ſhould be avoided as much as poſſible.

Every day's experience ſhews us, that bridges are much more ſecure in dead or ſmooth running water, than when conſtructed on fords, or near them, and eſpecially upon the upper ſide.

Bridges are, in general, built too narrow. The ſinking of foundations, centering, and maſon-work, between a bridge of twelve feet wide, and one of eighteen feet, bear not the ſame proportion, of two to three, in point of expence; that is, if a bridge, twelve feet wide, ſhould coſt 200*l.*, it does not follow, that one, eighteen feet wide, ſhould coſt 300*l.*; this every perſon, the leaſt converſant in bridge-building, muſt know.

In this county, it is only throwing away public money, to introduce cut-ſtone coping on the battlement, as the country people carry it away, and few of the road-overſeers give themſelves any further trouble about it. Stones, placed edgewiſe, of about a foot high, and reaching quite acroſs the wall, are preferable

able to cut ſtone, as there is no temptation for ſtealing the former, and this part of the work comes as cheap as any other part of the battlement; whereas cut ſtone coſts from 8*d.* to 1*s.* a foot, running meaſurement, according to the thickneſs of the wall.

The ſide-walls of ſmall bridges, commonly called pipes, or gullets, are generally built of lime and ſtone: where ſuch are only flagged over, this precaution is altogether unneceſſary. By ſinking well, where the caſe may require, and uſing heavy materials at bottom, a dry wall is fully as ſecure as a wet one, or that built of lime and ſtone, which, from much experience, I know to be the caſe.

There is more foul play and tricks uſed in bridge-building, than in making of roads. Maſons find it their intereſt to make bad work, in order that the job may the ſooner come *round* again, and common road-overſeers are ſeldom ſharp enough to prevent this fraud; hence the great uſe of intelligent honeſt inſpectors.

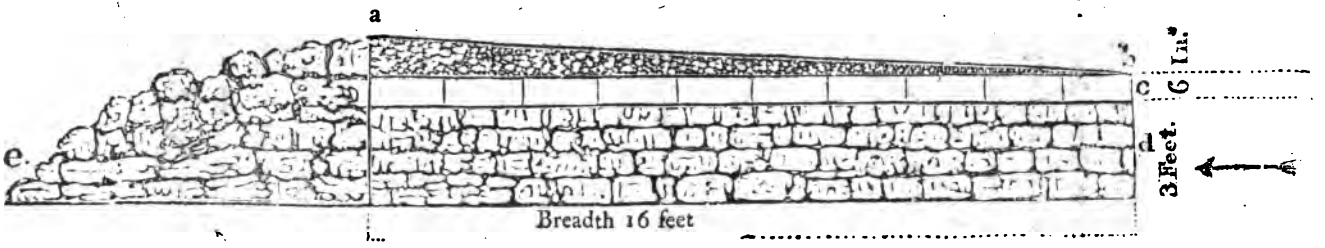
I have, more than once, experienced inſtances of the foundations of bridges being undermined, previous to floods, in order that the whole fabric might tumble down; nor have I ever known road-overſeers to be any way active in detecting ſuch villainy. Indeed, ſo long as overſeers have a double intereſt in public works, we cannot expect much fair play, for many of the overſeers themſelves are alſo the executers, and, where

where that is not the caſe, their friends are. I am very far, however, from ſuppoſing, that all the under overſeers of the county are of the ſame caſt; many of them I know to be men of ability, and poſſeſſed of liberal ſentiments. It is not the men, who have the charge of public works, that are ſo much to blame, but the ſyſtem adopted, and the partiality, that I am ſorry to find ſo prevalent through the whole county; and the only ſure way of preventing this evil is, in my opinion, the appointing of inſpectors, and farming the roads.

I have introduced, in the neighbourhood I live in, a ſpecies of bridge, ſome years ago, which I find to anſwer extremely well for a ſmall mountainy brook. When the water is low, the whole of it paſſes under; and, in times of floods, part goes under, and part over the bridge. The paſſenger, notwithſtanding, is ſeldom ſtopped, as mountainy floods ſoon ſubſide; they ſeldom laſt longer than an hour or two; and, in roads not very public, it ſeldom happens that any perſon may go that way during the flood; and, in caſe a perſon ſhould paſs during that time, if on horſeback, he may ford it; if on foot, there are ſtepping-ſtones convenient.

This kind of bridge may be built for one-third leſs than in the uſual way, where the ſituation may be found anſwerable; and, if well executed, is never ſubject to be out of repair: it is only calculated, however, for opens, which are intended to be flagged, inſtead of ſmall arches.

The under ſketch may ſerve to give ſome idea of this ſimple ſtructure.



Fall from *a* to *b*, of ſixteen inches, ſhould be well ſecured by a ſtrong pavement, or rather thin ſtones, placed edgewiſe, eſpecially towards *a*.

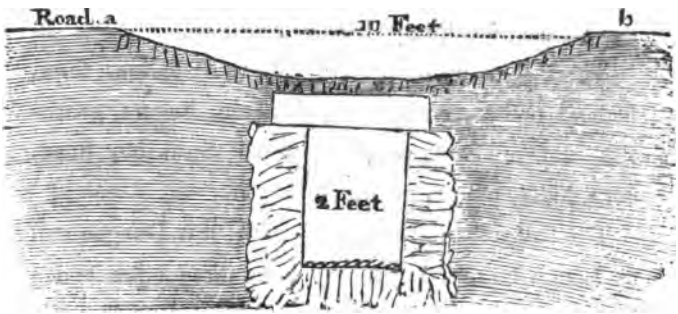
c. The flags covering the pipe or gullet.

d. The ſide-wall, which ſhould be well ſunk, if the foundation be of a ſoft nature.

When the pipe is filled with *flood-water*, it will ſoon encreaſe over the flagging, *c*, and gradually riſe, till it arrives at *a*, from whence it will tumble over the rocks, or large ſtones, *a*, *e*, without doing the leaſt injury, if the ſtones are ſecurely placed, by ſinking them well, and fixing the largeſt at bottom. The bottom ſhould be well paved, and made a dead level, which ſhould continue ſo for ſome diſtance below *e*. One of the great ſecrets, in building all ſorts of bridges, is, that, if the water is not naturally level, or nearly ſo, means ſhould be taken for that purpoſe.

In

In the ſection, acroſs the pipe or gullet, the ſhape of the road will appear thus, and give ſome idea of the quantity of water, that may be diſcharged over it.



The pipe is capable of diſcharging ſix cubical feet of water, and the ſegment, *a*, *b*, is equal to nearly ten cubical feet. But there is no neceſſity of being confined to one pipe; more may be introduced, if the caſe ſhould require it, and the excavation made in proportion. Inſtead of flags, logs of oak may be uſed, which will laſt for ages.

SECT. 2. *State of Navigations and Navigable Rivers.*

THE navigation from Strabane, for upwards of three miles, where it falls in with the river Foyle, is certainly of infinite ſervice to the county, on account of cheapening the carriage of goods of various ſorts, from

Derry to Strabane, the whole of the way by water. I underſtand, that it is in contemplation to lengthen the canal a conſiderable way further down the river, in order to avoid ſome ſhoals and ſand-banks, which, in dry ſeaſons, much impede the navigation.

There come up from Derry goods of various ſorts, ſuch as timber, coals, iron, flax-ſeed, liquors, groceries, &c. There go down from Strabane, linen, corn, hides, tallow, potatoes, turf, &c.

The navigation, from Coal-iſland, near Dungannon, to Lough Neagh, in length about three miles and a half, is at preſent but indifferently attended to; in many parts it is almoſt choaked up with weeds. The chief uſe of this canal is for conveying coals from the colliery. Some timber and other articles are brought up to Coal-iſland, which are diſperſed through the country on cars and horſes.

The only navigable river in the county, except the river Foyle, is the Black-water, which runs from Lough-Neagh to Black-water town, diſtance about ten miles by water. In this courſe there are two or three ſhoals, which require to be removed. The boats are from twenty to eighty tons burden, and bring to Black-water town ſeveral kinds of goods from Newry (from which town there is alſo a canal to Lough-Neagh), ſuch as timber, iron, coal, culm, ſlates, aſhes, ſalt, &c., and bring back barley, oats, and ſometimes potatoes, and alſo linen cloth, as there are two

or

or three extenſive bleach-greens in the neighbourhood of Black-water town. Armagh is only four miles from this village, with almoſt a dead level the whole way; a canal, of courſe, would be found quite practicable.

A canal, made from Verner's ferry, or from the Moy to Dungannon, both about the ſame diſtance, not exceeding five miles by land, would render the county of Tyrone completely well circumſtanced, perhaps as much ſo as any county in the kingdom. A few years have ſhewn, of what infinite advantage the Strabane canal has been, and is likely to prove to the community. A canal, from either of the above places to Dungannon, could not fail in producing the like effect, ſince the country, for many miles about each of thoſe principal towns, is nearly alike circumſtanced, with this difference, that Dungannon is quite ſurrounded by bleach-greens, which is one principal reaſon for introducing a canal. Situated as thoſe towns are, at both extremities of the county, renders them very advantageouſly ſituated for trade; either of them being within twenty miles diſtance of any part of the county, and conſiderably nearer to all thoſe parts moſt eminent for the linen trade. Linens might be at once ſent by water to Dublin, to England, or to any other diſtant part, inſtead of ſending them on cars to Dublin, which at preſent is the common mode. Dungannon is at preſent, and has been for many years back, a flouriſhing town;

town; how far a canal would add to its proſperity, requires no demonſtration.

I have not ſufficiently examined the country about Dungannon, ſo as to be able to form any idea of the beſt line for a canal, or how far water might be ſecured in quantity ſufficient to feed it; but the latter, I conceive, there could be no doubt about, from the great number of extenſive bleach-greens all through the neighbourhood, the waſte water of which muſt be very conſiderable.

SECT. 3. *State of Fiſheries.*

I KNOW of no regular fiſhery in the county, except that near Strabane, which is confined to ſalmon. This is immediately under the inſpection of the perſons, who rent the royalties of the rivers, which ultimately fall into the river Foyle.

Though there are ſevere fines and penalties againſt poaching, or killing of fiſh unlawfully, yet vaſt depredations are always committed by idle fellows, who make this buſineſs a great part of their occupation. The moſt deſtructive way of deſtroying fiſh is, by night, with lighted faggots or ſtraw, at the time the ſalmon are about to ſpawn, or emit their young.

Thoſe, who pay for privilege of fiſhing, would act well for themſelves and the community, if, inſtead of paying

paying yearly ſalaries to water-keepers, as they are called, they would allow them the full amount of the fines ſettled by law. I have tried both ways, and found the latter to ſucceed completely.

SECT. 4. *State of Manufactures, whether encreaſing.*

THERE is no manner of doubt, that the linen manufacture is daily encreaſing, notwithſtanding the great number of people leaving the country for America every year, and alſo the number to ſupply the militia.

There cannot be a greater proof of the encreaſe of the linen trade, than the great riſe of flax land. About ten years ago, half a rood, or twenty ſquare perches (generally Cunningham meaſure, leſs, by nearly one-ſeventh, than plantation meaſure), let at 8*s.*: now (in 1802) the ſame quantity of land frequently brings double that ſum. Another circumſtance clearly points out the encreaſe of the linen trade: common labourers, who were not much in the habit of weaving ſome years ago, generally work out two or three yards of linen at night in the winter time, after the common day's labour is over. I mention this, to ſhew the induſtry of the people; and many of this deſcription are obliged to work at common labour for their employers in the day time, at leaſt for a great part of the ſeaſon.

From

From a long reſidence, and an intimate knowledge of this country, I can aſſert, that at leaſt one-third more land is now occupied by flax, than what had been ten years ago, which is a convincing proof of the encreaſe of the linen manufacture; the great riſe on linens, of late years, is another. Every day the induſtry of the people is gaining ground on bog and mountain, particularly the latter; and it is alſo notorious, that, ten years ago, as much land was taken up with crops of potatoes, oats, and barley, as at this day; this alſo ſhews, how much the culture of flax has been extended of late years.

At Cook's-town, a muſlin manufacture is eſtabliſhed, and is likely to ſucceed. At Strabane, by Mr. Roſs, corduroys, and other articles in the cotton way, are manufactured to no ſmall extent. In the barony of Clogher, much druggets are made for home conſumption, but there is no regular eſtabliſhment. Near Coal-iſland, in the barony of Dungannon, and at Fintona, in the barony of Clogher, are coarſe manufactories of earthen-ware, tiles, fire-bricks, &c. In every town, and in many villages, ſoap and candles are manufactured, and even in ſome country places.

Of

Of encouragement to them, and the peculiar aptneſs of the ſituation for their extenſion.

Some years back, the Linen Board gave premiums for the encouragement of flax-ſeed of Iriſh growth; the practice of ſowing Iriſh ſeed, however, has been diſcontinued, for reaſons known to the growers, who muſt be certainly well acquainted with the difference between foreign ſeed, and that of Iriſh growth; nor is it likely, that they would prefer paying ſuch high prices for foreign ſeed, if they found the Iriſh growth to anſwer the main end, which is that of having the good quality of the flax in view.

I do not know of any ſcheme, that could tend to encourage the linen trade, more than that of ſaving of fuel in bleaching. The quantity of turf, that is annually uſed in the county, is moſt aſtoniſhing.

I am ſurpriſed, that ſome enterprizing bleacher, before this time, has not taken a hint from Count Rumford's ſyſtem, which could not fail in anſwering the deſired end.*

In ſome bleach-greens, upwards of 10,000 kiſhes of turf are annually conſumed, or an area, at leaſt equal to 11,000 cubical yards, of made up fuel, fit for conſumption.

* At the Linen-hall, in Dublin, an apparatus is ſet up for the ſaving of fuel.

ſumption. Sixty kiſhes of turf is a reaſonable allowance for a cottier, ſo that one bleach-green conſumes as much fuel as 166 cots. This is a ſerious conſideration, and ſhould be an object worthy of the attention of all thoſe concerned. I make no doubt, but furnaces, properly conſtructed, might ſave four-fifths of the fuel conſumed at preſent.

The following eſtabliſhed Bleach-greens will ſerve to ſhew the preſent ſtate of the Linen Manufacture in the County.

Names of Bleachers.	*Places of abode.*
William Shaw, -	Caſtle Caulfield, near Dungannon.
James Guaherty,	Dungannon.
Duffin and Co. -	Ditto.
Thomas Rodman,	Ditto.
William Grier, -	Ditto.
Thomas Grier, -	Ditto.
Robert Grier, -	Redford, near Dungannon.
John Grier, - -	Dungannon.
John Wilcock, -	Ditto.
Ditto (two), - -	Near Cook's-town.
——— Cook, -	Ditto.
James Grier, -	Ditto.
Thomas Grier, Jun.	Ditto.
J. Patterſon, -	Ditto.
James Cook, -	Ditto.
John Kenny, -	Ditto.

Names

Names of Bleachers.	*Places of abode.*
William Anderſon,	near Cook's-town.
A. Stewart, - -	Coal-iſland.
Brown & Sloane,	Ditto.
Thos. Grier & Co.	Ditto.
William Pike, -	Ditto.
——— Purcel, -	Brookfield, near Dungannon.
Jackſon & Eyre,	Blackwater-town. Theſe have two more bleach-greens adjoining, in the county of Armagh.
John Chambers,	Omagh.
—— Smiley, -	Near Strabane.
—— Quin, - -	At Duglaſs-bridge, below Newtown-ſtewart.
—— Sproule, -	Spa-mount.

With ſome others, now eſtabliſhing, or in contemplation of being ſhortly ſet on foot.

My information, with reſpect to the bleach-greens about Dungannon and Cook's-town, was from Mr. Wilcock of Dungannon, an eminent bleacher.

Some bleach on their own account; that is, they buy the linen cloth. Others bleach for the country, at ſo much a yard; but the greater number bleach for themſelves, and for others.

There are ſtill many eligible ſituations in the county for bleach-greens, many of which, no doubt, will ſhortly be occupied, from the rapid progreſs of the trade.

The

The following ſituations, among many others, are commodiouſly ſituated for water, aſpect, and fuel.

Three or four, between Lord Mountjoy's demeſne, at Raſh, and Newtown-ſtewart, on the river Struel.

One at Drumquin, by removing a corn-mill, and placing it a quarter of a mile below the village, where the fall and ſituation are much preferable to the preſent.

One or two on the Poa, or Fairy-water, between Poa-bridge and Dodean-bridge.

One above Mr. Chambers's green, near Omagh.

Several might be introduced, along the river between Omagh and Fintona, and from Ballinahatty to near Dromore. The ſituations are very good along thoſe rivers, but in ſome parts turf is rather ſcarce.

I have already mentioned drugget; here I beg leave to recur to this article, the encouragement of which would be found of the greateſt advantage to the lower claſs, both as to wearing apparel, and keeping them fully employed, at a ſeaſon when flax may ſometimes be out of the reach of the poor.

From the beginning of June, till towards the firſt of September, is the moſt dormant part of the year for ſpinning of flax. The poor people's ſtock, or what they generally grow themſelves, is commonly ſpun by the firſt of June; and the remainder of the ſeaſon, till the new flax comes in, is commonly ſupplied by flax purchaſed at the markets, or elſewhere.

During

The above period, therefore, is that, in which the poor might be, in ſome meaſure, employed in ſpinning of wool, as at that ſeaſon it is generally procured upon cheaper terms than flax. Beſides, ſummer weather anſwers beſt for ſpinning wool. A ſpinner can manage flax by the light of the fire only; wool requires more regular light: hence the latter is the beſt ſubject for the long day.

But there is another conſideration of great conſequence, trifling at firſt view as it may appear. The root of the common fern is at this ſeaſon replete with an oily glutinous ſubſtance, which is well known to make an excellent ſubſtitute for oil or butter, without which wool cannot be manufactured, unleſs the fern-juice be made uſe of. A pound of wool requires a quarter of a pound of butter, or the ſame proportion of oil, to prepare it for ſpinning, which may be ſaved by attending to the exudation of the fern, when cut up in ſmall pieces. Perhaps it might be an object worthy of chemical enquiry, to find how long this juice might be preſerved, and how to prepare it for that purpoſe. So far as I could learn from the common people, the root is cut into ſhort pieces, bruiſed in a mortar, and then put into a cloth, and preſſed out.

I have ſeen beautiful pieces of drugget, made up in this country by houſe-keepers. When thickened in the tuck-mill, it is warmer, and laſts longer than otherwiſe: in this caſe, two parts are generally compoſed of wool,

wool, and one of flax; in the uſual way, the wool and flax are equal.

I hope our northern farming ſocieties, when more generally eſtabliſhed, will attend to this hint.

SECT. 5. *Population.*

DOCTOR Beaufort's Memoir, of his map of Ireland, makes the number of houſes to be 28,704. From a great number of views, that I have taken in different pariſhes, I find the average of perſons to each houſe rather exceeds ſix, which number, by allowing ſomething for emigration, I ſhall abide by, ſo that the whole of the inhabitants may be ſet down at 172,224; a great population indeed, which, I believe, is very near the truth.

CHAP.

CHAP. VI.

RURAL ECONOMY.

SECT. 1. *Prices of Wages, Labour, and Provisions.*

SEVERAL cauſes affect the rates of wages and proviſions. Since the introduction of militia and yeomen, the value of labour has been conſiderably raiſed. Alſo, when the linen trade is good, the price of labour is ſure to riſe, as moſt of the labouring claſs are alſo weavers. In ſpring and autumn, labour is always higher than at other ſeaſons. Labour is always higher about towns than in country places; yet moſt labourers prefer the latter, as the jobs are generally long and ſteady, and proviſions are to be had upon more reaſonable terms.

It may appear ſomewhat ſtrange, that, when proviſions are higheſt, common labour is always found loweſt, and eſpecially if the linen trade be on the decline. Singular as this may appear, it is a fact that is fully known, and the principal cauſe is obvious: the farmer,

farmer, in order to ſave proviſions, endeavours to get through all, or part of the labouring work, by his own family, which was almoſt univerſally the caſe in the years 1800, and 1801.

Taſk-work, alſo, makes a material change in the price of day labour, as a good labourer can earn more money by the former than by the latter; of courſe, he will prefer the mode, by which he can make moſt.

Farmers generally feed their labourers, and, on that account, the wages are low, commonly ſix pence half-penny a day, except in the time of harveſt, when they generally get a ſhilling a day. But by far the greater number of the farmers get their labour done upon a different footing, as the cottiers are obliged to work for them to a certain extent, to pay for their cot-takes; and the farmers are always ſure, that the number of days ſpecified muſt be ſerved in the buſy ſeaſons. Sometimes contracts between farmers and labourers are ſo made, as to work a certain number of days in each week throughout the year, but this mode is not common.

Either for common labour or taſk-work, no regular ſteady rules are eſtabliſhed throughout the county, except in lord Mountjoy's improvements, which ſhall be noted in their proper order, when I come to treat of that place.

The middle prices of proviſions for the laſt ten years ending December 1799, may be ſtated as follows.

Oatmeal

	l.	s.	d.
Oatmeal, a peck of 10lb. - -	0	1	0
Potatoes, by the ſtone - -	0	0	3
Beef in winter, of a bad quality -	0	0	2½
——— in ſummer, generally good. -	0	0	4½
Mutton the year round, from 3d. to	0	0	4
Pork, in winter, - - -	0	0	3½
Bacon, - - -	0	0	6
Herrings, by the 120, from 3s. to	0	4	6
Salmon, from 3d. to - -	0	0	4

but in winter ſalmon is generally ſold by hand, or at ſo much a price; but this kind of ſalmon is of little or no value.

	d.
New-milk, in ſummer, by the quart -	1½
——— in winter - - -	3
Butter-milk, always bad, and dear. - -	
Freſh butter, of 18oz. to the lb. from 7d. to	10
Cheeſe generally bad, from 6d. to -	8

The loaf is never in proportion to the price of grain or flour. If the ſhilling loaf in Dublin be 6lb. the ſix-penny loaf, in all the principal and petty towns of this county, ſeldom weighs 2lb; all rules and regulations, relative to this buſineſs, are generally overlooked by thoſe, who ſhould put them in force.

Sect. 2. *Habitation, fuel, food, and clothing of the lower rank; their general coſt.*

There are two denominations of lower ranks, univerſally to be met with.

The firſt comprehends ſuch as have ſmall farms, by far too limited to make out a ſupport in any degree comfortable, perhaps for more than one half of the year, and too frequently not ſo much. Many of this claſs are under-tenants, or what is commonly called the *third man*, and ſometimes the fourth and fifth, and too often more ſteps removed from the lord of the ſoil. The further the diſtance from the landlord, of courſe the greater muſt be the poverty of the laſt undertaker, as every occupier muſt, or is ſuppoſed to have profit in the land.

The ſecond claſs are chiefly cottiers, who frequently derive under tenants, of different degrees, down from the lord of the ſoil. Many of this deſcription are weavers, as well as labourers. This claſs of people are generally more comfortable than the former, as they run no riſque, and have but little to loſe. But the under tenants (commonly called ſky-farmers) are by far the moſt miſerable part of the community, as has been obſerved in another place.

With reſpect to habitations, they are in general very bad, and eſpecially ſuch as are occupied by cottiers, who

who commonly engage only by the year, and from year to year. Sometimes the cabin is built by the farmer, commonly of ſtone and clay mortar, and ſometimes of ſods only. In the barony of Dungannon, ſome ſcattered cabins are built of mud, or yellow clay mixed with ſtraw for litter, but thoſe cabins are poorly made up; the roof is generally of bog fir, or bog oak, and thatched with oat or barley ſtraw, and ſometimes with ruſhes and ſprit, heath, broom, refuſe of flax, &c.

But the moſt general way of building cabins is by both parties, that is, by the farmer and labourer, in which caſe the latter is allowed ſome abatement in the firſt year's rent. Sometimes the whole is built by the cottier, and in this caſe a whole year is generally allowed for the trouble and expence of building, which is generally from three to five pounds. We ſeldom find the cabins of the poor ſubſtantial or comfortable, and, when built according to the laſt caſe, little can be expected in point of either, ſince the poor labourer has no permanent intereſt, but only from year to year. Hence we find ſo many cabins perpetually going to deſtruction through all parts of the country.

I have remarked, that a cabin may be built, for from three to five pounds; the difficulty of procuring the roof, of bog timber, is the greateſt the builder has to encounter with. The woods of Munterloney are almoſt cut down, which, for many miles round, and for a great

number of years back, ſupplied the country with timber for roofing, cars, and plough timber, with every other article the country ſtood in need of; now the principal dependence is on the bogs, the procuring timber from which in their preſent ſtate is always attended with many difficulties. The thinning of Lord Mountjoy's improvements is now beginning to afford the country ſome relief, which, of courſe, will encreaſe every year; alder, birch, ſcotch and ſpruce firs, and mountain aſh, are the only articles, which can be cut away at preſent, to eaſe more valuable timber; thoſe articles are from fourteen to twenty years growth, and are well calculated for cabin building, and many other domeſtic purpoſes. Regular prices are fixed for every article ſuitable to the country, which ſhall hereafter be explained, when I come to treat of the improvements at large; here I ſhall only take notice of ſuch articles as are commonly made uſe of in cabin building, this being the ſubject under conſideration.

In the neighbourhood of Omagh, and within a reaſonable diſtance of the improvements of Raſh, a cabin of the following dimenſions may be built for the under prices.

24 × 14 feet

24 × 14 feet in the clear, ſide-wall 6 feet, 2 gables.

	£.	s.	d.
Stone, and clay-mortar, - - -	1	10	0
Three couples, or principals, - -	0	15	0
Three dozen of ribs, - - -	0	15	0
Two wheel-car-loads of wattles, - -	0	5	5
One brace-tree or beam, to ſupport a chimney, - - - - - -	0	8	0
The above articles are procured from the improvements.			
Two door-caſes of bog-oak, - -	0	4	4
Two doors of foreign ſtuff, - -	0	8	8
Two windows, caſes, and glazing, with lead-light, - - - - - -	0	6	6
Thatch, I ſet down at - - -	1	0	0
Labour of roofing, thatching, &c. -	0	15	0
	£.6	7	11

A cabin, of the above deſcription, is reckoned in this country a reſpectable and comfortable manſion for a cottager.

Fuel.—Turf or peat is univerſal, and to be procured almoſt through all parts of the county upon reaſonable terms. It frequently happens, however, that, in moſt towns, this article is extravagantly high, though ſuch towns may be ſurrounded with bogs. This ariſes from a kind of monopoly, as many individuals have uſurped a right to large tracts of bog, which the poor are too often deprived of. This ſhould be made a ſubject of ſerious

ſerious enquiry by gentlemen of landed property, in whom the royalties of bogs are moſt commonly inveſted. Coal is uſed at Strabane and Dungannon occaſionally.

I believe, by all leaſes, the tenants have no right to more privilege of bog, than a reaſonable allowance for their own conſumption; notwithſtanding that they may have large tracts annexed to their farms, all of which the lord of the ſoil may diſpoſe of at pleaſure. If, inſtead of ſuffering tenants to engroſs large tracts of bog, as they uſually do, to the great detriment of the poor, landlords would ſet about to quarter and parcel out ſuch tracts, and particularly in the vicinities of towns and villages, they would ſoon experience the good effects of it. In many ſituations, the acreable rent would be found to exceed that of the beſt arable land in the ſame neighbourhood. There is a very ſtrong inſtance of this between Dungannon and Verner's ferry, where there is a very extenſive bog judiciouſly laid for ſale by the acre, and which, I am told, lets on an average at the rate of two guineas by the acre, and is by no means of a good quality. Here the proprietor makes a good yearly revenue; the poor are accommodated for many miles round; and, by the good manner of cutting out the bog upon a regular face, great future benefits may derive from meadow and paſture.

General Coſt.—The coſt of fuel depends, in a great meaſure, on the diſtance it is to be brought, as the price

price of horſe-labour is always high, ſeldom leſs than half a crown a day.

Sixty kiſhes is generally the allowance for a cottier, the kiſh being equal to a cubical yard, but it is generally heaped as high as it can be conveniently carried, and eſpecially when the turf is of a light ſpongy quality. The uſual price for cutting, and making up ready for burning, is 14*s.* by the hundred.*

	£.	s.	d.
Forty kiſhes, being conſidered equal to a hundred,	1	1	0
Drawing, at ten turns a day,	0	15	0
	£.1	16	0

The above is pretty near the average of the country parts of the county; but, in ſome towns and villages, the caſe is very different; the kiſh is ſeldom leſs than 1*s.* 1*d.*, and often, in winter time, ſo high as 2*s.* 8½*d.* Regular modes, of parcelling and dividing bogs, can alone eaſe the inhabitants of towns of this grievance, at leaſt to a certain degree, as numbers of the towns-people would find it their intereſt to cut their own turf, and, conſequently, the poorer claſs belonging to towns,

* A hundred of turf is equal to forty wheel-car-loads, or 120 ſlide-car-loads. Twenty clamps, eight feet long, four feet wide, and ſix feet high, tapering to the top like the roof of a houſe, are equal to a hundred, and in which ſtate they are generally ſold; the meaſurement to be ſettled in four days after the clamps are made.

towns, who might not be able to cut turf, might buy upon cheaper terms, when the bulk of the inhabitants were in the habit of cutting for themſelves.

Food.—Potatoes and oatmeal are the chief articles, which compoſe the poor man's food the year round. In the ſevere years of 1800 and 1801, large quantities of barley-meal were uſed, without which half the people muſt have ſtarved. Before thoſe periods, barley-bread was quite unknown.

The poorer claſs cannot afford to uſe much butter, being obliged to ſell the greater part of it, in order to purchaſe neceſſaries, which they want, ſuch as ſoap, candles, tobacco, ſalt, &c. In ſummer and autumn, milk is chiefly uſed; the remainder of the ſeaſon, herrings are moſt common with the poor.

Sometimes a pig at Chriſtmas may fall to the lot of a family, but this is not often the caſe, unleſs potatoes are plenty. Two or three labourers frequently join in purchaſing a cow in November, which generally coſts 6*l.*, and in return get 2*l.* for the hide and tallow.

The general prices of food are given in the preceding ſection, to which I refer.

Cloathing.—Although a good deal of woollen cloth is made up by the farmers for their own conſumption, yet a ſmall portion of it falls to the lot of the lower claſs. Common frize, bought at the country ſhops, is the general cloathing for the common labourer, at leaſt for the coat and great coat. This frize is chiefly brought

brought from Connaught; here it is coloured or dyed according to fancy, but blue is the favourite colour of all claſſes. Tickens, cheap corduroys, &c. are commonly worn for waiſtcoat and breeches.

The women commonly wear druggets and coloured linen for coat and petticoat, and the cloak is generally of ſome cheap ſhop-cloth, chiefly of a grey colour, tho' they affect ſcarlet, when they can afford the price. The young women are fond of yellow and green ſtuff petticoats. Shoes and ſtockings are only ſecondary conſiderations; on Sundays and holidays, and going to fairs and markets, they are always worn by the women, both young and old.

General Coſt.—Some years ago, clothing was conſiderably cheaper than at preſent.

	£.	s.	d.
A middle-ſized man will require 8 yards of frize, or any other narrow cloth, for a coat, waiſtcoat, and breeches, -	0	18	8
Trimmings, 5*s.* 9½*d.*; taylor, 4*s.* 4*d.* -	0	10	1½
Two ſhirts, 10*s.*; ſhoes 5*s.* 6*d.*; two pair of ſtockings, 4*s.* 8*d.* - - -	1	0	2
Hat, two years, 3*s.* 3*d.* - - -	0	1	7½
Great coat, two years, 16*s.* - -	0	8	0
	£.2	18	7

It is ſeldom the caſe, that a labourer, or even a middle-rate farmer, is thus comfortably cloathed at once; the

the above, however, may ſerve as a ſtatement, which is tolerably accurate, according to the prices in 1800 and 1801; but I ſhould be ſtill nearer the truth, were I to add another pair of coarſe ſhoes or brogues, which would bring the expence to 3*l.* 4*s.* 1*d.* inſtead of 2*l.* 18*s.* 7*d.*

Womens' cloathing is alſo conſiderably higher at preſent, than was the caſe ſome years ago. Drugget, which formerly ſold at 1*s.* a yard, now ſells at 1*s.* 4*d.*, and, when ſtriped, a penny or two-pence more in the yard; but, in this ſtatement, I ſuppoſe the drugget plain.

	£.	s.	d.
A middle-ſized woman will require eight yards for coat and petticoat, - -	0	10	8
Making up, - - - - -	0	2	2
A grey cloak, - - - - -	0	11	8
Making up, - - - - -	0	1	1
Shoes and ſtockings, - - - -	0	5	6
Other wearables, - - - -	0	6	0
	£.1	17	1

If the coat be of cotton, and the petticoat of quilted ſtuff, the price will be higher; and, if the cloak be ſcarlet or crimſon of the cheapeſt ſorts, it will ſtill add to the expence, perhaps up to 2*l.* 5*s.* or 2*l.* 10*s.*

Farmers'

Farmers' ſervant-girls appear very ſmart on Sundays and holidays; and, at fairs and markets, linen or cotton gowns are common with this claſs, and petticoats and ſhort cloaks of the former, which they contrive to ſpin for themſelves, after complying with the taſk they are obliged to perform for their employers.

The induſtry, with which this claſs apply themſelves, is moſt worthy of praiſe; they are generally obliged to ſpin a dozen of two-hank yarn in the day, beſides ſome drudgery in the houſe; yet they make out time to ſpin a little for themſelves weekly, which in the ſeaſon amounts to ſomething, ſo as to afford them ſuch wearables, as have been already mentioned, with other neceſſary articles. Inſtead of doing a little for themſelves daily, and in order that the wheel might be always fully employed, the uſual mode is, to give up five days cloſe application to the employer, ſo as to ſpin ſix hanks in that time; the ſixth day is their own.

From this account, an active girl may ſpin for herſelf fifty-two hanks, or dozens of yarn, in the year, which may be rated equal to fifty-two yards; nor is it uncommon to find numbers of this claſs, who are equal to this induſtry, and ſometimes more.

It has been ſhewn, under the article *Extent of Culture*, that a family, conſiſting of ſix, would conſume, in the ſeaſon,

17½ cwt.

	£.	s.	d.
17½ cwt. of oatmeal, here I ſhall ſay,	10	10	0
36 barrels of potatoes,	9	0	0
Fuel I have ſtated to be,	1	16	0

	£.	s.	d.			
Mens' cloathing,	3	4	1			
Womens' ditto,	1	17	1			
The reſt of the family, ſay,	3	0	0			
				8	1	2
				£.29	7	2

The drawback for the *cot-take*, in point of proviſion, may be thus ſtated, after deducting ſome allowance for ſeed.

	£.	s.	d.			
Half an acre of oats,	2	2	0			
One rood of potatoes,	4	10	0			
				6	12	0
				£.22	15	2

It may be thought a matter of ſurpriſe in other countries, how a cottier, with ſix in family, could be able to make out 22*l.* 15*s.* 2*d.*, with many other incidental occurrences.

In this county, and throughout all the North of Ireland, ſo far as the linen trade is in a proſperous way, the difficulty is eaſily anſwered; the wheel and the loom

loom anſwer all. If a farmer's ſervant-girl be able to clear 52*s.** a year, beſides her wages and maintenance from the farmer, what muſt a united family of ſix perſons do by their induſtry in the ſame time?

* I take for granted, that fifty-two yards of fine linen will be equal to 52*s.*, clear of all expenſe.

CHAP.

CHAP. VII.

GENERAL SUBJECTS.

SECT. 1. *Number and Size of Villages and Towns.*

THE barony of Dungannon contains the following towns and villages.

1. Dungannon, one of the moſt proſperous towns in the North of Ireland in the linen trade, nor is it inferior to any for its rapid progreſs in building. When the new town will be completed, Dungannon altogether will have no equal in the North. In the buildings there is one fault, which generally prevails, and that is, that the houſes are narrow, which, in buildings in general, is certainly bad economy.

2. Cook's-town, tolerably eminent in the linen trade. The muſlin manufacture is likely to take place here.

3. Aughnacloy; linen and yarn.

4. Stewart's-town; ditto.

5. Callidon.

6. Pomeroy.

6. Pomeroy.

7. Moye; extremely well ſituated for trade, having the Blackwater river navigable, ſo far as Blackwater town, from Lough Neagh.

The above are the principal towns in the barony; the following are the villages.

1. Orritor.
2. Tullyhog.
3. Dunnaghy.
4. Brackogh.
5. New-mills.
6. Coal-iſland; navigation might be improved.
7. Donaghmore; brewery and mill for preparing barley.
8. Caſtle-Caulfield.
9. Egliſh.
10. Carnteel.
11. Benburb; a famous limeſtone quarry.

The Barony of Clogher contains,

1. Clogher.
2. Augher.
3. Ballygawley.
4. Five-mile-town.
5. Fintona; good linen market.

The above are ſmall towns, but of more conſequence than country villages.

The

The Barony of Omagh contains,

1. Omagh, the aſſize town.
2. Dromore.
3. Trillick.
4. Ballinahatty.
5. Six-mile-croſs.
6. Killetor.
7. Derg-bridge; bleaching might be eſtabliſhed.
8. Drumquin; bleaching might likewiſe be eſtabliſhed here, by removing a mill.

The above are villages, except Omagh.

The Barony of Strabane contains,

1. Strabane; a good market town for many articles, and eſpecially cloth.
2. Newtown-ſtewart; a good market for cloth and yarn. Several bleach-greens might be eſtabliſhed on the river Struel, between this town and Omagh.
3. Dunnamanagh.
4. Ballimagorry; ſituation for a bleach-green.
5. Ardſtraw-bridge; - ditto.
6. Gortin.
7. Claudy; a ſituation for a bleach-green.

Except the two firſt, the above are ſmall villages.

Strabane is at preſent improving; its canal is the chief cauſe. Newtown-ſtewart is moſt eligibly ſituated for improvements of many ſorts.

SECT.

SECT. 2. *State of Tithe, its general Amount on each Article—what Articles are exempt, and what charged by Modus.*

UPON this ſubject I have but very little to ſay, with reſpect to any new light, that might be thrown upon it. Much has been ſaid by others, with regard to reforming tithes, &c., which, in my opinion, can anſwer no material end.

With reſpect to this county, I find, in general, a very good underſtanding between the incumbents and the people. Some let their tithes during their incumbency; ſome yearly, at ſo much an acre, ſeldom exceeding two ſhillings for good arable and meadow. Others lay on ſo much an acre againſt oats, barley, hay, flax, and potatoes: the three laſt articles are, in general, let at moderate terms, frequently not acreable, only ſo much by modus. The moſt general way is by yearly compoſition; nor could I learn, that the extravagant prices of proviſions, in the years 1800 and 1801, made the leaſt alteration in the raiſing of tithes throughout the county. When let by compoſition, large and ſmall tithes are of courſe included in the contract, though the latter are ſeldom of any material conſequence to the incumbent.

The following is a list of small dues, given by a neighbouring clergyman as a very old custom in his parish, but never exacted. I suppose the same holds good in most parishes throughout the diocese, and also not demanded; at least I never could learn, that they were.

Modus.—Turf 6*d.*; garden 1*s.* 1*d.*; Easter dues 4*d.*; a new-milch cow 9*d.*; stripper cow 4½*d.*; sheep or lamb 1*d.*; foal 6*d.* Marriage 2*s.* 6*d.*; christening 1*s.* 6*d.*; burial 1*s.* Each tradesman 1*s.* yearly.

Oats and barley are the principal articles, on which an acreable charge is made; the former from 4*s.* to 6*s.*, and the latter sometimes as high as 8*s.*; but this mode is not general.

Sect. 3. *Use of Beer and Spirits—whether either, or which is encreasing.*

The extreme dearth of food, in part of the year 1799, and the whole of the years 1800 and 1801, put a total stop to the distilling of spirits, and, in a great measure, to brewing.

For many years back, spirits have taken the lead of malt liquor in a considerable degree. I am not altogether clear, but the quantity of spirits, distilled in this county for the last forty or fifty years, was more than double

double the quantity of beer brewed. I am certain, when all the private liquor is conſidered, the compariſon will not be thought ſurpriſing.

At preſent it is a pleaſant reflection to find, that the ſcene is about to be altered, and that in a ſuperior degree, in favour of malt liquor. The number of breweries lately eſtabliſhed, and about to be fitted up, is a convincing proof, that malt liquor is taking the lead, or at leaſt bids fair for it. Another circumſtance is the rapid demand brewers have, inſomuch, that few of them will give any credit.

The following are eſtabliſhed breweries.

One at Dungannon, on a large ſcale.
Two at Donaghmore, near Dungannon.
One at Stewart's-town.
One at Aughnacloy, on a large ſcale.
One at Newtown-ſtewart.
Two at Strabane.

SECT. 4. *State of Education, Schools, and Charitable Inſtitutions.*

A SCHOOL, under the patronage of Mr. Stewart, &c. I am informed, has been eſtabliſhed at Cook's-town ſome time ago.

At Raſh, under the protection of Lady Mountjoy, and Miſs Gardiner, a ſchool for twenty-four girls has

been lately eſtabliſhed. Sewing, ſpinning both linen and woollen, manufacturing ſtraw hats, &c. are the chief occupations of the girls; nor are their moral duties neglected, but, on the other hand, ſtrictly attended to.

With reſpect to education, attainable from day-ſchools by the lower claſs, very little real benefit can be derived; as, when children are able to perform any ſort of work, ſuch as herding of cattle, they are then taken from ſchool. From the age of ſix or ſeven, to that of ten or eleven years, is the uſual time for children to be kept at ſchool; at this early period they acquire but little, and that little is generally forgotten, before they come to the age of underſtanding.

Even the children of farmers and others, above the level of common labourers, fare but very little better than thoſe of the lower claſs; as their ſituation in life obliges them to early habits of induſtry, without which rents cannot be paid.

From night-ſchools alone, real benefits, to the foregoing claſſes, are moſt likely to derive. What I ſhall here offer on this ſubject, is founded upon conſiderable experience.

An extenſive night-ſchool has been eſtabliſhed, under the ſanction of the late Lord Mountjoy, for the purpoſe of inſtructing the labouring boys of the demeſne, being principally planters. This has been an early inſtitution of his Lordſhip's, ſo far back as the year

year 1783, and has continued to flouriſh and proſper to this day.

It generally commences about the firſt of October, and continues to the firſt of February, and ſometimes later. Hours of attendance, from ſix in the evening to ten or eleven o'clock at night. A guinea a month is the maſter's ſalary, for any number of boys not exceeding ſixteen, which is the higheſt number allowed. The boys are always divided into claſſes, and three or four guineas are allowed in the ſeaſon, to be diſtributed in ſmall premiums, ſo regulated, that every individual may, at one time or other during the ſeaſon, come in for one or more. This mode not only has for its object the ſtirring up of emulation, but enables them to purchaſe paper and candles, as a reward for their diligence.

The hope of obtaining premiums for the time to come, or for the next winter ſeaſon, has an amazing good effect during the ſummer months, as they are as induſtrious as poſſible, between working hours, to keep in mind, or rather encreaſe, what they have acquired the preceding winter; and, the better to enable them to do this, they are generally allowed, from ten to two o'clock, to inſtruct each other, in ſuch parts of the demeſne as they may chooſe to reſort to: but when this indulgence is given, which only takes place in the longeſt months, they go to their work at five in the morning, and quit at ſeven, or, perhaps, half after ſeven in the evening.

The

The result of this salutary institution has proved demonstratively its good effects. Within the last fifteen years, many useful persons have been sent to various parts, as planters, &c.

But the great object is, the preventing of idleness, which is always best accomplished, by filling up the *scraps* of *time*.

Many similar institutions might be adopted throughout this extensive and populous county, though, perhaps, not with equal facility; yet they could not fail in being productive of a great deal of good. When we shall have the happiness of seeing farming societies established, they, no doubt, will consider this object. Much might be done by contributions at houses of worship. Grand juries might also countenance such institutions.

I often regretted to find such a number of children, both male and female, occupied the greater part of the year in herding cattle; but this wretched habit is not peculiar to this county. This must be submitted to, till our system of enclosing becomes more perfect.

But since, in our present exposed state, those little *herds** are indispensibly necessary, we should endeavour to fill up their vacant time as usefully as possible.

From

* Herds, or such as have the charge of cattle, most commonly turn out indifferent labourers.

From nine or ten o'clock in the morning, till two or three in the afternoon, in the ſummer ſeaſon, the cattle are houſed, for the purpoſe of encreaſing manure: during all this time, thoſe, who have the charge of them, do nothing but idle away time. In every diſtrict, a country ſchool-maſter is to be found, and a ſmall pecuniary matter would anſwer to pay for a few hours each day for the ſchooling of thoſe children; this might alſo be an object for farming ſocieties, &c.

Sect. 5. *Of abſentee and reſident Proprietors.*

There are very few proprietors in the county, who may be conſidered as total non-reſidents, or, at leaſt, ſuch as live altogether out of the kingdom. For inſtance, Lord Belmore has ſeveral properties in the county, yet he is ſet down as a non-reſident, becauſe he lives in a neighbouring county; the like may be ſaid of others. Some there are alſo, who have properties in the county, yet reſide on rented farms in other parts of it; yet here I do not conſider them as actual reſidents, they not living on their eſtates. There are ſeveral clergymen, poſſeſſed of conſiderable property, excluſive of church livings, which are here omitted altogether, as the account of the number of pariſhes is given under the article *Eccleſiaſtical Diviſion*, and which compoſe a large portion of the county, when joined to biſhop's lands.

The

The following is a Liſt of the principal Proprietors.

Abercorn, Marquis of
Archdall, ———, Eſq.

Bateman, ———, Eſq. R.
Bailie, ———, Eſq. R.
Belmore, Lord
Blackard, ———, Eſq.
Buchanan, John, Eſq. R.
Brabazon, ———, Eſq.

Crawford, Henry, Eſq.
Colhoun, ———, Eſq.
Crawford, John, Eſq.
Callidon, Lord, R.
Caulfield, ———, Eſq. R.
Charlemont, Lord

Earne, Meſſrs. R.
Eccles, Daniel, Eſq. R.

Ferguſon, Sir Andrew
Forſyth, ———, Eſq. R.

Gladſtanis, George, Eſq.
Galbraith, ———, Eſq. R.
Gorges, Hamilton, Eſq. R.
Gage, Mrs.
Gorman, ———, Eſq.

Hamilton,

Hamilton, James, Esq.
———, Sir John
———, William, Esq.
———, Hon. A. C. R.

Irwine, Gorges, Esq.
———, Henry, Esq.

Johnston, Charles, Esq.

Knox, Hon. Thomas, R.

Lifford, Lord
Lendrum, James, Esq. R.
Lighton, Sir Thomas
Lowry, Robert, Esq. R.
———, Mrs. R.
Lindsay, Robert, Esq. R.

M'Causland, John, Esq.
———, Oliver, Esq.
M'Clintock, ———, Esq.
Montray, John, Esq. R.
Montgomery, Hugh, Esq.
Maxwell, Warren, Esq.
Mountjoy, Lord
Moore, Nathaniel, Esq.
———, John, Esq.
Malone, Mrs.

Northland,

Northland, Lord, R.

Perry, George, Eſq.
Pettygrew, Robert, Eſq. R.
Powerſcourt, Lord

Richardſon, John, Eſq.
———, Sir William, R.
Reynell, Richard, Eſq.

Strong, ———, Eſq.
Saville, ———, Eſq.
Stewart, John, Attorney General
Stewart, James, Eſq. R.

Tradennick, ———, Eſq.

Verner, James, Eſq.

White, Francis, Eſq.
Waterford, Marquis of

Thoſe, marked R. may be conſidered ſteady reſidents, or, at leaſt, they live the greater part of their time in the county. Beſides the above, there are a great number of freehold properties in perpetuity, but comparatively ſmall; the occupiers of which, with very few exceptions, live on their properties, and are, of courſe, a uſeful part of the community.

Sect. 6. *Of Circulation of Money or Paper.*

The great perfection, to which the linen manufacture is brought throughout the county, but more particularly in the barony of Dungannon, cauſes a great circulation of ready ſpecie. Except with principal bleachers, and linen merchants, paper currency is not common. In towns, ſmall notes are pretty general. With reſpect to weavers, and the lower manufacturers of linen, ready caſh is the only currency.

Of jobbers in cattle there are many; with thoſe, of courſe, nothing is to be met with but hard money, as paper, in our fairs and markets, is never taken as caſh.

On the whole, a ſmart circulation of hard ſpecie prevails, between dealers in cloth and yarn, jobbers, &c.

Sect. 7. *Of Farming or Agricultural Societies.*

Nothing, in the way of farming or agricultural ſocieties, has yet appeared in the county; it is, however, a pleaſing reflection to think, this may not be long the caſe, as the minds of the people are of late much turned that way.

Sect.

Sect. 8. *Of Mills of every kind.*

I believe there are only two flour-mills in the county, one near Dungannon, and the other near Strabane; but the wheat, manufactured in both, is principally the produce of other parts, as at preſent very little of this grain is grown in the county.

The beſt mill in the county, for manufacturing oatmeal, is at Cook's-town, which, with very little expence, might anſwer for a flour-mill.

A capital mill for wheat and oats was built a few years ago by Lord Mountjoy at Raſh, and there is no doubt, that the neighbourhood will ſoon afford plenty of wheat to ſupply it.

I counted no leſs than 124 mills in the county in 1800. Griſt-mills are the common names that mills go by, but this is underſtood only of ſuch as prepare oatmeal and malt, and ſometimes barley for bread, which was univerſally the caſe in 1800 and 1801.

It is not eaſy to point out, with any degree of accuracy, the number of effective mills in the county, as ſo many of them are perpetually out of order, ſome demoliſhing, others repairing, &c.

In order to aſcertain, as nearly as poſſible, how many mills, kept regularly to work, might be equal

to

to the ſupply of the county, I ſelected ſix in different parts of the county. I found the *ſutton*,* annexed to the ſix mills taken together, amounted to about 28,000 acres, between arable, paſture, &c. The county contains 467,700 acres; ſo that about one hundred mills, kept fully employed, may be deemed ſufficient for the county.

There are mills of other deſcriptions, ſuch as beetling-mills, one of which muſt be at every eminent bleach-green; tuck-mills, for thickening woollen cloth, and ſometimes drugget, which are plentifully eſtabliſhed throughout the county; flax-mills, for ſcutching flax; but theſe are not ſo numerous as the quantity of flax, raiſed in the county, ſeems to require, nor are they conſtructed, in general, to the advantage they are capable of, ſince it is well known, that, by means of fluted cylinders, flax or lint might be broken at the ſame time. This would ſave a great deal of *ſevere* labour, which, according to the preſent mode of breaking flax, or preparing it for the ſcutchers, is unavoidable.

To the above may be added a plating-mill, for making ſpades and ſhovels, at Fintona, and one about to be

* *Sutton* is a certain diſtrict claimed by mills, in virtue of leaſes or agreements between the lord of the manor and the miller; ſometimes a whole manor, at other times a half manor, &c.

be ſet up at Newtown-ſtewart; but theſe have been taken notice of in another place.

As in all countries, many of the mills of this county are great nuiſances; if better conſtructed, much fewer would anſwer. There is no end to the diſputes between parties, on account of the injury lands ſuſtain by mill-dams, &c.

How far ſteam-engines might remedy this inconveniency, is a matter I ſhall leave others to judge of. I ſhall only remark, that the firſt coſt would be found the only material expence, as fuel is ſo plenty, particularly in the baronies of Omagh and Strabane. By adopting ſteam-engines, many acres of choice meadow-land might be ſaved to the public.

SECT. 9. *Of Plantations and Planting.*

CONSIDERING the extenſive properties in this county, and the eligibleneſs of many parts of it for planting, yet we cannot boaſt much of the progreſs of this neceſſary improvement.

At Killymoon, a great deal had been formerly planted, and, of late, additions have been made. It would be much in favour of the extenſive plantations of this place, had judicious thinning taken place many years ago. It is not yet too late; much may ſtill be done for preſent and future emolument.

At

At Liſſen, the ſeat of Mr. Staples, near Cook's-town, the planting is very proſperous: but there is only part of theſe improvements in this county; the remainder lies in the county of Derry.

A conſiderable ſcope has been planted by Lord Northland, and his ſon Mr. Knox, within the laſt twenty years, which is at this time in a thriving ſtate.

Lord Callidon has planted conſiderably in the ornamental ſtyle, and, in general, with good taſte.

Mr. Montgomery planted conſiderably near Aughnacloy.

Sir William Richardſon planted, with good taſte, his demeſne at Augher, and the plantations are in a flouriſhing ſtate.

Mr. Montray, at Favoroyal, near Augher, is in poſſeſſion of large tracts of natural woods, which are managed in an economical manner.

At Clogher, the biſhop's demeſne and deer-park afford ſome old timber; but this beautiful demeſne has been much injured in this, its chief ornament, ſome years ago.

Mr. Eccles, near Fintona, has done a good deal in the way of planting, and ſo has Mr. Lendrum.

The Rev. Mr. Hill has great merit for his taſte in planting and ornamenting about his glebe-houſe, in the pariſh of Longfield, near Drumquin.

Mr. Lowry has planted a conſiderable number of trees at Pomeroy; but his ſituation requires much planting, and in very heavy maſſes.

Mr.

Mr. Stewart, the Attorney General, has planted with taſte and judgment, in a mountainous ſituation at Athenree, near Six-mile-croſs; and, like a real planter, he is laying a good foundation, by eſtabliſhing his own nurſeries.

The Hon. A. C. Hamilton has planted conſiderably, from time to time, at Beltrum-caſtle, near Gortin.

The Marquis of Abercorn has, and is planting largely, at Baron's-court, near Newtown-ſtewart. I cannot learn, that he claimed any premiums from the Dublin Society, but I am certain, from the extent of his young plantations, he was frequently entitled to do ſo. On the whole, Baron's-court is ſtrongly planted, and all the plantations are going on proſperouſly. It is to be hoped, that the Marquis will perſevere in his original plan, namely, that of planting out the greater part of the north ſide of Beſſy-Bell mountain, which overlooks his demeſne. Greater difficulties have been fairly conquered by Lord Mountjoy within theſe laſt fourteen years.

I might have mentioned ſeveral other improvements upon ſmall ſcales. On the whole, the people are beginning to look forward, and ſee what is their real intereſt.

With very few exceptions, the foregoing have been undertaken within the laſt fourteen or fifteen years; and it is a pleaſing reflection to find, how much the

face

face of the country has been in that ſhort time improved, in conſequence of thoſe plantations.

The following ſketch may ſerve to ſhew the extent of Lord Mountjoy's planting at Raſh, near Omagh, ſince the year 1779. But firſt I muſt remark, that no regular account has been kept of the number of trees planted, or the quantity of land taken into plantation, prior to the year 1791, as in that year the claims for premiums on the Dublin Society commenced.

Of the Effects of the Encouragement heretofore given to Planting by the Society, particularized in the Liſt annexed.

Premium planting.					*Planting not claimed.*
YEARS.	A.	R.	P.	TREES.	TREES.
In 1791 and 1792,	11	3	29	35,212	6,882
— 1792 and 1793,	23	0	30	76,087	13,674
— 1793 and 1794,	12	3	20	31,708	16,031
— 1794 and 1795,	29	2	30	65,603	11,190
— 1795 and 1796,	33	0	0	84,550	1,660
— 1796 and 1797,	31	0	25	86,910	6,067
— 1797 and 1798,	16	1	30	44,450	18,535
— 1798 and 1799,					30,430
— 1799 and 1800,	7	0	0	20,040*	7,488
— 1800 and 1801,	12	1	31	39,410	24,805
	178	2	35	483,970	136,762

A.	R.	P.		
178	2	35	Premium planting,	483,970 trees.
68	0	0	Not claimed, - -	136,762 ——
100	0	0	Prior to 1791, - -	200,000 ——
141	0	0	Old woods.	——
487	2	35	- -	820,732

Beſides

* No premium granted, being under ten acres.

Beſides the above, there were given to the tenants of the eſtate, ſince the year 1795, upwards of 100,000 tranſplanted trees; and, from the commencement of the improvements at Raſh to the foregoing year, I dare ſay, there were double the number here mentioned given out, of which, however, no regular account has been kept. Without exaggeration, 300,000 trees were made preſents of to gentlemen, ſince the year 1784.

The article, alluding to the account of premiums, is perfectly accurate, both as to the quantity of land, and the number of trees; but the plantations, formed between 1791 and 1801, both years included, for which, from local cauſes, premiums could not be claimed, are only ſuppoſed to be, according to the uſual mode of planting here, fair tranſplanted trees, not leſs than four years old, and at leaſt once tranſplanted, at about the diſtance of ſix feet apart, which is found nearly equal to 2000 plants to the acre; but premium planting is never confined to this number.

The plantations, formed prior to the year 1791, are ſuppoſed to be equal to one hundred acres; if ſurveyed, I dare ſay they would amount to more. Theſe are ſuppoſed 2000 plants to the acre at preſent, but exceeded that number conſiderably ſome years ago, as a large portion of this part had been originally under nurſery, which had been from time to time thinned

out; and, of late, cutting out, inſtead of thinning by tranſplanting, took place.

For the laſt twenty years, there never were leſs than ſix acres of fair well-eſtabliſhed nurſery at Raſh, for the ſupply of the improvements, &c. By doing the plants full juſtice in point of room, an acre may afford annually 20,000 plants, as 40,000 are not too many for an acre, when completely ſtocked; ſo that, by letting the plants remain two ſeaſons in the nurſery, there may be always an annual ſupply of 20,000; but this muſt be underſtood of gentlemens' nurſeries, who may be ſuppoſed not ſcarce in ground; but it is quite otherwiſe with nurſery-men, who commonly overſtock their nurſeries, and, of courſe, the plants are too much drawn up for want of room.

Six acres of nurſery, according to the above ſtatement, would produce, in twenty years, 2,400,000 plants; and I have ſhewn, that

820,732 trees were planted in the demeſne;
100,000 ſuppoſed to have been given to tenants.

920,732

This ſhews a great difference, between the ſuppoſed produce of ſix acres of nurſery in twenty years, and the number here ſtated, which can only be accounted for by the great quantities of trees put out as nurſeries

ſeries (now maſſive plantations), prior to 1791, and what were given as preſents to the gentlemen of this county and others.

Of any improvements, which may occur for future encouragement, and particularly for the preſervation of Trees when planted.

Without cloſe attention to the following requiſites, it is in vain to plant.

Complete fencing, and guarding againſt cattle. Preparing the ſoil according to circumſtances, particularly in rendering it ſufficiently dry, when it is naturally too wet. Encreaſing ſhelter by every means, where neceſſary; and planting judiciouſly the different ſpecies of plants, agreeably to the ſoils and aſpects they are beſt calculated for.

The different modes, made uſe of for the encouragement and preſervation of plantations, ſhall be fully ſtated, when I come to treat of Lord Mountjoy's improvements at large, to which I ſhall refer as a model, that has been found, from ſeveral years experience, to have completely anſwered the end.

It is in the power of the Society to adopt a mode, by which planting cannot fail of being conſiderably improved.

Hitherto,

Hitherto, no reſtrictions have been laid on the ſize or age of plants, under the head of premium planting, and, of courſe, vaſt quantities of ſeedlings have been planted, ſince the commencement of this *ſalutary* inſtitution.

Seedlings in general are not calculated for our ſoils, upon the great ſcale of planting. It is in vain to purſue the ſame modes here, as are practiſed in Scotland, and other parts of Great Britain; the luxuriance of our ſoils, in general, points out the abſurdity of the ſyſtem.

The Society requires, that a certain number of plants muſt be firſt planted to each plantation acre, and that a given quantity muſt be kept up for a certain number of years. When ſeedlings compoſe part of ſuch plantations, they muſt be narrowly watched from time to time, in order to keep up the quantity ſpecified by the Society.

I know, from much experience, that this mode in the end becomes very expenſive, and that at the loſs of many thouſands of trees, which might otherwiſe be ſaved; and, after all, the deſired end is ſcarcely ever completely anſwered, at leaſt, not ſo effectually, as if the planting had been formed the firſt day, of regular well-conditioned tranſplanted trees, that would at once defy the luxuriance of our ſpontaneous growth, and give no further trouble, after being fairly planted, till the operation of thinning ſhould take place.

The

The improvement I beg leave to ſuggeſt is, that the valuable trees, ſuch as oak, larch, Spaniſh cheſnut, beech, ſycamore, elm, aſh, pine, &c. ſhould at leaſt be once tranſplanted, and that for two ſeaſons before they are put out for good; ſo that, in moſt caſes, the plants ſhould be four years old at that time, which, for the generality of deciduous trees, is certainly the beſt age.

In this caſe, the number of valuable trees might be limited to one thouſand to each acre, which might be replaced, in caſes of accidents, agreeably to the term ſpecified by the Society.

I would lay no reſtraint upon any quantity of inferior timber the Society might think proper to allow, over and above the number above ſtated, ſuch as birch, alder, mountain-aſh, &c.; theſe, with ſome of the poplar and ſallow kinds, are free growers, and capable of taking care of themſelves, though put out as ſeedlings, or cuttings.

SECT. 10. *Of Nurſeries within the County, and Extent of Sales.*

THERE is not a nurſery for ſale within the county, though few counties in the kingdom are better calculated for that purpoſe. I am fully convinced, that planting would go on rapidly, were there only a few eſtabliſhed

eſtabliſhed nurſeries, where planters might reſort to, without being at the expence of ſending to diſtant parts. It is not the price that ever deters men, who only plant upon a ſmall ſcale, but the diſtance of carriage, and the hazard of ſuffering by bad packing, and of the plants being too long out of ground. Theſe are certainly ſome of the principal cauſes of planting not being more general, and not any pecuniary views.

In the courſe of my agricultural excurſions in 1800, and 1801, I have had many unpleaſant reflections, in travelling over waſte tracts, which are ſcarcely calculated, or ever can be, for any purpoſe, except for planting, and where little or no expence in incloſing would be found neceſſary, particularly in rocky ſituations, where large ſtones are in plenty, and might be eaſily collected to form rough dry walls.

The firſt great point to attend to, ſhould be to give every kind of encouragement to nurſery-men, confining them only to common articles, ſuch as thornquicks, aſh, oak, beech, larch, fir, ſycamore, alder, &c. Grand juries and farming ſocieties might do ſomething by way of encouragement, as well as the Dublin Society.

Were nurſeries eſtabliſhed ſufficiently numerous, gentlemen would be induced to plant one hundred trees for the one they do at preſent; and, when planting became general, there would be no temptation for ſtealing, ſince it is a well-known fact, that, when any article

article becomes plenty, the temptation for pilfering diminiſhes in proportion to the encreaſe of the article. I dare ſay, when potatoes were firſt introduced, it was found difficult to ſave them from the common people. I know, from experience, that, when the turnip ſyſtem was firſt eſtabliſhed at Collon, by the Right Hon. John Foſter, for the firſt ſeaſon vaſt quantities of them were taken away by the common people; but it was ſoon found, that, by giving up a ſmall part of a field for the purpoſe of ſupplying every poor perſon, who might want a few turnips, and giving a little turnip-ſeed to ſuch as might be diſpoſed to ſow it, it ſoon put an end to any thing like pilfering.

So, with reſpect to timber-trees, if nurſeries were eſtabliſhed, ſo as to make theſe articles general, and that gentlemen would turn their thoughts upon dividing with their tenants, or otherwiſe encourage them to raiſe or purchaſe plants, we would, in a very little time, find all people diſpoſed to purſue one common cauſe. This, with long leaſes, and other encouragements, would ſoon make a great change in favour of planting.

I have often turned my thoughts, with reſpect to the moſt eligible ſituations for nurſeries in the county. Strabane, Omagh, Aughnacloy, Clogher, and Dungannon, appear to me the beſt; not only on account of finding at thoſe places favourable ſoils and ſituations, but alſo of dividing the county tolerably regular, and, in general, convenient to the neighbouring counties,

ties, which could not fail of finding material advantage from such situations.

Besides the encouragement already mentioned, given by the Dublin Society, &c., much might be done by the gentlemen of landed property, without being at any material expence to themselves. A kind of guardianship over the respective nurseries is as much as might be expected from them or their agents; to see that the sales might go on regularly, the prices settled once a year, and proper returns of stock made out, with other useful regulations.

The nursery, we shall suppose at or near Strabane, might be patronized by the Marquis of Abercorn, the Bishop of Derry, the Hon. A. C. Hamilton, &c.

That at Omagh by Lord Mountjoy, Lord Belmore, Mr. Stewart the Attorney General, &c.

That at Aughnacloy, Clogher, or probably Fintona, by Lord Belmore (as he has extensive properties in the county), Sir William Richardson, Mr. Montray, Mr. Montgomery, Mr. Eccles, &c.

That at, or near Dungannon, by Lord Northland, Mr. Knox, Lord Powerscourt, Lord Calidon, Lord Charlemont, Mr. Stewart of Killymoon, &c.

SECT.

Sect. 11. *Prices of Timber, and State of it in the County.*

The prices of timber are very high, and it is difficult to procure upon any terms. The Hon. A. C. Hamilton's woods, in Munterloney, for many years back afforded the chief supply to the county for cabin-building, slide-cars, ploughs, &c., but those woods are now almost cut down. The woods were chiefly of oak, and will, of course, be a considerable time before they come round again, as the time limited to keep cattle out, after being cut, is by far too little, not more, I understand, than eight years. Indeed cattle should never be suffered to get into woods at any period.

At present a couple, or principal, for a cabin of sixteen feet wide, costs from 5*s.* to 8*s.*; a dozen of ribs for a cabin, from 6*s.* to 10*s.*; a slide-car 5*s.*, and so on. The timber is never sold by the foot from those woods, as the dimensions are too small for that purpose.

Ash is remarkably scarce; it is chiefly used for wheel-cars and ploughs: the stuff for the former usually costs two guineas, and the latter from 12*s.* to 16*s.*: many of the latter are made of oak and birch, but ash is much better for that purpose. Ash is frequently sold by the cubical foot, at so high a price as 3*s.* 3*d.*

Foreign

Foreign fir at this time (1801) ſells at Strabane ſo high as 6*l.* per ton.

The chief reliance the county has, is upon bog-fir, which many of the bogs produce in great plenty, but it is in general attended with great difficulty and expence in being able to manage it, for want of roads, and proper conveniencies to raiſe it. This timber is ſometimes ſold at half a crown the cubical foot, for the purpoſes of loom-timber and mill-ſhafts, but bog-timber in general is ſold by bulk, eſpecially bog-oak. Even-grained bog-fir is looked upon to be full as good for roofing and lofting ſtables, &c. as foreign fir or pine; it makes excellent laths, and, when beaten out into ſmall filaments, is found to anſwer for ropes, which are principally uſed for cording of beds, and, in damp places, will laſt conſiderably longer than hempen ropes. Twenty yards is the uſual length for a bed-cord, which is commonly bought for 10*d.* The roots and fragments of the bog-fir are uſed for this purpoſe, and it is a kind of trade with many poor people in the vicinities of bogs.

It has been ſtated, under the article *Habitation, fuel, food*, &c., how far the thinning of Lord Mountjoy's improvements ſerves the country, ſo far as alludes to cabin-building. Here I ſhall only add a few articles, uſed for other purpoſes.

A ſlide-

	£.	s.	d.
A ſlide-car of ſpruce-fir,	0	3	3
Car-feet of birch or alder, per pair,	0	0	6½
A ladder, from twelve to eighteen feet, of ſpruce-fir, from 6*s.* 6*d.* to	0	10	0
A plough of birch,	0	12	0
A two-horſe barrow of birch,	0	8	0
Shovel, and fork-handles, of aſh, each,	0	0	6½
Swingle-trees of aſh, each,	0	0	6½
Rakes, finiſhed, of aſh, each,	0	1	1
Turf-kiſhes of various ſorts, each,	0	6	6
Manure-kiſhes, each, from 2*s.* 2*d.* to	0	4	4
Potatoe-baſkets, each, from 6*d.* to	0	1	0

SECT. 12. *Quantity of Bog and Waſte Ground.*

IT is not eaſy to aſcertain the quantity of bog and waſte ground throughout the county; and, even if it could be actually made out, it would only anſwer for one ſeaſon's information, as every year adds conſiderably to the quantity of land brought into culture, meadow, and paſture.

Perhaps, within the laſt twenty years, this county has made as rapid a progreſs, with reſpect to the bringing in of waſte land, as any other in the kingdom, and particularly mountain; yet a vaſt deal remains to be done,

done, and much of what has been done is ſtill capable of further improvement.

Poſſibility and means of improving it.

To enter into a minute detail of the different practical modes, neceſſary to purſue for the improvement of the great variety of ſoils of this county, would require a large volume, which, however, at a future day, I hope to ſet forth in another work, now in tolerable forwardneſs. At preſent I ſhall only ſtate a few obſervations, relative to the great outlines of reclaiming unprofitable land.

I have already treated largely on the ſubject of roads; but the nature of the object under conſideration requires me to ſay a little more here. It has been obſerved of what infinite advantage roads are, in helping to get at bog-timber, limeſtone, &c. Now, in caſe of bog-timber and limeſtone being altogether out of the queſtion, and that a large ſcope of bog or mountain was in contemplation of being reclaimed, the firſt object the cultivator ſhould have in view, after draining, are roads, to draw forward materials to reclaim ſuch parts; therefore draining and making of roads ſhould go hand in hand, ſince their dependance on each other is ſo nearly connected.

It is the public who pay for roads, and there is no doubt that every encouragement ſhould be given to them,

them, to make the moſt they can of every circumſtance, that may naturally occur in their reſpective diſtricts, for the improvement of their lands.

Since timber is at preſent ſo extravagantly high, and the proſpect of a ſupply of it, for domeſtic purpoſes, ſo very remote, every advantage ſhould be taken, to accommodate the public with the kind of wood, that naturally offers in almoſt every bog in the county enough, I dare ſay, to ſupply the country for ages; but the extreme difficulty of being able to get at it when raiſed, renders it, in many caſes, dearer than foreign timber, when all the trouble attending it is conſidered.

Among the various means of improvement, none appears more effectual than watering or irrigating land, when at all practicable. It is, indeed, a very pleaſing reflection to find, what rapid ſtrides this uſeful improvement is making of late. But, as might be expected, the people in general are ignorant, both of the proper application, and execution of the work; but no doubt, they will ſoon fall into meaſures ſo nearly connected with their real intereſts, and where ſo little ſpeculation is neceſſary to remove every doubt of hazard or riſque. It is the genius of the people of theſe parts, to embrace immediately any improvement, in which a ſpeedy return of gain is the prevailing object; among which the ſubject under conſideration is one of the utmoſt importance, ſince the expence is nothing,

when

when compared to the great benefits to be derived, and especially, when the work is executed in a good manner.

Farming societies, no doubt, will always encourage this species of improvement.

Mr. Stewart, of Stranorlan, in the county of Donegal, has set a good example on foot, with respect to draining and irrigation. He brought over from Staffordshire a person, who has given a strong specimen of the good effects of irrigation, and, of course, has set a good example to others. This person is now (1802) actually employed, at so much a year, by the *Raphoe farmers' society*. Indeed I may date the commencement of irrigation, done in a workman-like manner, from Stranorlan, in the year 1800, which was the commencement of Mr. Stewart's operations.

I am very far from being against importing persons from England and Scotland, for the purpose of watering, or any other improvement; but, upon the other hand, in some particular instances, I approve of it. In general, however, I apprehend, that this country would reap more solid advantage, and that in a shorter time, by sending persons to those parts, and particularly to the *Lothians* of the latter.

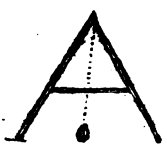
The subject in question admits of so many modes of performing it, that it would take up a volume to do it any degree of justice, and, after all, much would remain to be done. There is scarcely a spot, which does

not

not require ſome mode peculiar to itſelf. There is, however, one circumſtance, which muſt always be complied with where neceſſary; otherwiſe watering, inſtead of improving land, will injure it, and render it worſe than before the operation took place. This is, the effectually getting clear of ſprings, and ſtagnated water, before irrigation be attempted.

The great point to conſider is, to cheapen the work as much as poſſible, where draining is neceſſary prior to watering, as many of thoſe drains, neceſſary to drain the land, may be alſo found uſeful to act as conductors or leaders, to anſwer irrigation; that is, when the act of irrigation is not going on, many of the drains may perpetually act in draining.

There has been a good deal ſaid of late, on the ſubject of draining, by Elkington and others, to which I refer. In many caſes, great accuracy in levelling is requiſite: the ſpirit level is not in the power of every farmer, and even if it was, few underſtand the application of it. The common maſon's level is tedious; for expedition, the iſoſceles triangle is the beſt, and is as accurate as any: with this a man can level almoſt as faſt as he can walk, attended by a boy to carry pins, to ſtick down where the level may point out.



There is a great deal in habit in any undertaking; fo with levelling; a good eye never fails to facilitate this kind of buſineſs.

In 1801, I found a great number of Lord Mountjoy's tenants buſily employed in watering their meadows and paſture-grounds. As it was the firſt year, of courſe it was managed in a ſlovenly and imperfect manner. I fingled out a perſon, who was in the habit of watering for ſome little time before in the demeſne. This man has an exceeding good *eye*, and has alſo a great liking to irrigation, which is every thing. I ſent him, with his ſimple triangular level, through the eſtate; and, in the courſe of a few weeks, he made a wonderful reformation in the ideas of the people, ſo that now the greater part of them are practitioners, and irrigation is become quite a ſcience among them.

I only mention this circumſtance as a hint to improvers, as every neighbourhood in the kingdom muſt have ſome perſons, whoſe abilities are ſuperior to thoſe of others, and therefore it ſhould be the object of the proprietors to ſelect them.

The advancing of money to poor tenants, at the time of taking out a leaſe, would, no doubt, in many inſtances, produce a good effect, in forwarding the means of improvements, or rather placing the money on ſuch a footing, as to be occaſionally laid out on improvements, according to contract.

Tenants

Tenants in general are so wretchedly poor, that a great length of time elapses before any permanent advantage can derive to them from the improvement of their farms. Indeed it is too frequently the case, that, during the whole course of the lease, for want of means or ability, the farm does not yield probably one-fourth of what it might have done under good management, and laying out some money early, for ditching, draining, liming, &c.

Instead of the landlord being a loser by this mode, he would find, at the expiration of the lease, a great benefit, and encrease of property.

If, for example, a farm consists of twenty acres, at 10*l.* a year upon a thirty-one years lease, let the landlord, for the first fifteen years, advance 3*l.* a year, to be laid out in draining, liming, &c. The next sixteen years, the rent may be raised to 13*l.* a year. By this mode, the landlord will be nothing out of pocket; and it is very plain, that no interest, accruing from 45*l.*, could be equal to the encreased value of the land, at the expiration of the lease.

There might be other modes adopted, to enable the tenant to get on, according to circumstances; I only suggest this as a hint.

It is evident, that long leases must be a powerful means of improving lands. Upon short leases, such as twenty-one years, men have no spirit to get forward, and especially where confidence does not exist between

maſter and tenant, which, indeed, is too often the caſe.

Farming ſocieties may produce a good effect, by giving premiums, and alſo by employing perſons, ſkilled in the improvement of bog and mountain, to inſtruct the people.

Much might be done with reſpect to burning of lime upon a large ſcale. Public lime-kilns ſhould be introduced, and ſome bounty or premium offered; indeed, without them, lime would find its own level, by charging a reaſonable price. This is fully demonſtrated by Mr. Stewart aforeſaid, who built a kiln ſeveral years ago, and continues to ſell the lime to his tenants at a reaſonable rate, and to tenants of other eſtates at a more advanced price than what he charges his own. The good effects, produced by this inſtitution, ſoon became evident throughout his eſtate, ſince, for every barrel of lime, that had been formerly laid on the land, twenty barrels have been uſed ſince the eſtabliſhment of the kiln.

From my own knowledge of this county, I am inclined to believe, that, by eſtabliſhing lime-kilns, and ſelling at a reaſonable rate, it would be found one of the beſt improvements that could be introduced.

A barrel of lime, containing thirty-ſix gallons,* generally coſts from 18*d.* to 2*s.* The carriage of lime-ſtone,

* The barrel ſhould be forty-two gallons.

ſtone, for perhaps three or four miles, renders this article extremely high, as the ſtone is conſiderably heavier before than after it is burned. The true plan, therefore, is, to have the lime-kiln built as convenient to the quarry and bog as poſſible, particularly to the former.

At a public lime-kiln, where buſineſs is well attended to, there will ſeldom happen any diſappointment; whereas there is no end to the delay and trouble attending lime burned in the uſual way, in little ſorry pot-kilns,* which are perpetually out of order.

Fully convinced of the utility of a public kiln, I have engaged in this buſineſs upon a large ſcale, and am convinced, that I ſhall be able to ſell lime at 14*d.* a barrel the year round.

Obſtacles to improvement, and the beſt means of removing them.

The means of improvement, being underſtood and complied with, muſt, in ſome meaſure, remove the obſtacles.

The

* A pot-kiln is nothing more than a hole dug out of the ſide of a dry bank, built up with ſtones, without any cement, one ſide of which muſt be broke up for the purpoſe of getting out the lime, when burned. Theſe kilns are of various ſizes, but ſeldom exceed thirty barrels of roche-lime.

The following ſeem to be among the greateſt obſtacles to improvement.

Rack-rent appears to be the moſt diſtreſſing to the community at large, but particularly to the cultivator of the ſoil, and never fails to affect the head landlord in ſome degree. The more intermediate tenants there are, between the lord of the ſoil, and the perſon who cultivates it, the worſe for both, becauſe it is very evident, that every perſon, who may have a claim or an intereſt in the land, will, of courſe, have ſome profit. This clearly points out, that the landlord is not paid the real value for his land, and that the under or loweſt tenant pays a great deal too much.

Happy would it be for the proſperity of the kingdom, if no perſon was concerned in land, except the lord of the ſoil, and thoſe, who actually cultivate it.

Agents, not acquainted with country buſineſs, may be conſidered a great bar to improvement. The improvement of land depends very much upon the activity and knowledge of agents.

I believe it is a general cuſtom throughout the kingdom, to exact duties of men and horſes from the tenantry of eſtates, to bring home the landlord's fuel, corn, &c.; I know it is generally the caſe in this county. In another place, under the article, *General ſtate of Leaſes*, I have pointed out ſome objections to this mode; here I have only to remark, that I conſider it a great impediment to induſtry, becauſe ſuch as are bound

bound to fulfil ſuch *petty* engagements, muſt always attend at ſeaſons when their own works are moſt preſſing.

The ſituations of many mills are alſo great obſtacles to improvement.

There is another circumſtance, much complained of by farmers in general. They have a notion, that bog and mountain, newly reclaimed, muſt become ſubject to tithe, ſo ſoon as they are brought into a ſtate of cultivation. I underſtand, that ſome ſecurity is ſettled by law for new improvements; of this, however, the people are in general ignorant.

SECT. 13. *Habits of induſtry, or want of induſtry among the people.*

IT is rare to find more induſtrious people, than thoſe of this county generally are. The want of induſtry proceeds more from not having the means of being induſtrious, than from the inclination of the people towards idleneſs. In tracts, capable of producing corn, potatoes, and flax, we find few ſpecimens of ſloth or inactivity; both men and women are uſefully employed. At night, in the winter time, it is very common for a labourer to make *6d.* or *8d.* by weaving, after his day's labour. Girls, of nine or ten years of age, generally make from *1s.* to *1s. 6d.* a week by ſpinning.

It

It is only in the mountainous parts that we find any thing, that appears not induſtrious. In thoſe parts, the management of potatoes, oats, and turf, is chiefly the outer work, which occupies the men only part of the year; the remainder is generally employed in weaving.

Whenever taſk, or piece-work, occurs, it never fails to excite induſtry.

The hardſhip the poor people, who occupy mountainous parts, labour chiefly under is the want of flax, as many mountains are not fit to produce that article; therefore they muſt purchaſe, frequently at a dear rate. Perhaps there is no way, by which the poor could be more materially aſſiſted, than by laying up ſtores of flax when cheap, and ſelling it to them at the firſt coſt; this might be a conſideration worthy of the attention of farming ſocieties and others.

The various exertions, uſed by many in collecting manures, are ſurpriſing. I have frequently found half an acre of potatoes in the poſſeſſion of poor families, who had not a four-footed beaſt except a cat or dog; and all made from mud or mire, aſhes, ruſhes, ſprit, &c. Broom and furze, in ſtrong clay ſoils, anſwer extremely well for manure for potatoes, and of theſe the poor take advantage where they are to be found. I have known good crops of potatoes produced from common heath or heder.

SECT. 14. *The uſe of the Engliſh Language—whether general, or how far increaſing.*

EXCEPT through the wilds of Munterloney (chiefly in the barony of Strabane) the Engliſh language is moſt prevalent; indeed throughout the county it is gaining ground every day. The Roman Catholics are the only ſect, who are fond of ſpeaking the Iriſh language, and with them too it is wearing off very much.

The people of this county in themſelves differ as much, perhaps, as thoſe of ſeparate kingdoms. The people of the baronies of Dungannon and Clogher are much more poliſhed, than thoſe of Strabane and Omagh generally are. The inhabitants of Strabane and its vicinity ſeem quite a different race of people from thoſe of Munterloney, who are in the ſame barony. In like manner thoſe, in and about Omagh, differ from the pariſhes of Tarmonmaguirk and Tarmonomungan, in the ſame barony. This obſervation holds good with reſpect to all the towns, and country parts.

SECT.

SECT. 15. *Account of Towers, Caſtles, Monaſteries, Ancient buildings, or places remarkable for any hiſtorical event.*

I DO not recollect having met a round tower in the county, or any remains of one; and although round towers are peculiar to many parts of the kingdom, yet very few of them are to be met with in the North.

Old caſtles are numerous, but in general they appear to have never been of much conſequence, or of any conſiderable ſtrength; many of them, however, are partly compoſed of a very ſtrong cement, and almoſt impoſſible to reduce, even with gun-powder.

The following are the moſt conſiderable in the county.

One in the town of Newtown-ſtewart, but not very ancient. Another near the town, circularly built, and of great antiquity. This, we are informed, had been the reſidence of the kings of Ulſter. Part of this old caſtle projects eight feet beyond its baſe, and has the appearance of being ſuſpended in the air, ſo great is the ſtrength of the cement, which keeps the ſtones together.

At Baron's-court, near Newtown-ſtewart, is an old caſtle, ſimilar to that in the town, and it appears to be of about

about the ſame antiquity. We are informed, that both were burned by the Iriſh in 1641, and even at that time inhabited. A fourth caſtle is ſaid to have been near the town, but at preſent we can make out no traces of it.

Kerliſh caſtle, near Drumquin, appears to be very ancient, and is of conſiderable extent.

Two old caſtles near Dunnamanagh, in the barony of Strabane.

Benburb, on the borders of the county, in the barony of Dungannon, appears to be the largeſt in the county. It is built on a limeſtone rock, upwards of 120 feet nearly perpendicular, over the Black-water, which at the caſtle forms nearly a right angle, ſo that two ſides of it were completely fortified by nature. Though the materials for building are here remarkably good, both lime, ſand, and ſtone, yet the caſtle was but weakly built, the cement was bad, and the ſtones commonly of the pebble kind.

At ſome diſtance from the caſtle, in the village of Benburb, is a ſmall ancient building, which appears to have been a watch-houſe belonging to the caſtle; this is ſtrongly built. Another ſmall building, near the latter, ſeems to have been intended to ſupport a ſun-dial.

At Augher, in Sir William Richardſon's demeſne, is a beautiful old caſtle upon a ſmall ſcale, which is kept in tolerable preſervation.

The

The caſtle of moſt conſequence in the county, is that of Mountjoy, or Mountjoy-caſtle, on the borders of Lough Neagh, which is indeed a fine venerable pile of building.

From the great number of town-lands throughout the county, of which the word *caſtle* makes part of the name, ſuch as Caſtle-town, Caſtle-rody, Green-caſtle, &c. we have reaſon to conjecture, that numbers of caſtles formerly exiſted, of which, at preſent, we can trace nothing but the names. This obſervation is not peculiar to the county of Tyrone; it is general throughout the kingdom.

Except old caſtles, other ancient buildings are very rare.

As to monaſteries, though a conſiderable portion of land is tithe-free, yet I do not recollect having ſeen the remains of any old monaſtery.

Daniſh forts and Druids' altars are very numerous; the former are held in great reverence by the common people, in any of which we ſeldom find the traces of the plough or ſpade. The planting of ſuch conſpicuous ſpots would add much to the beauty of the country, and the fencing of them would be attended with very little expence, as they are ſo circumſtanced, that the fence is already in a great meaſure completed, or at leaſt might be made ſo with very little trouble. There are few places where trees would proſper better, the ſoil having been originally collected and brought there from

from other parts; and on this account, and from its never being broken up, we frequently find it both deep and rich.

There are other monuments to be met with, held in great veneration by the lower claſs, and particularly thoſe of the Roman Catholics, ſuch as ſtone croſſes, many of which are filled with hieroglyphic figures, and holy wells, as they are called, where people make ſtations, or perform a kind of pilgrimage. The common people not only act this kind of mummery, as they ſuppoſe, for the ſalvation of their ſouls, but give the waters to their cattle, at certain ſeaſons, as an antidote againſt diſorders, which probably do not exiſt.

SECT. 16. *Churches—Reſident Clergy—Glebes, and Glebe-houſes.*

WITH very few exceptions, the clergy are all reſidents. There may be ſome inſtances of pluraliſts, but this is not common in this county at preſent. As to glebes and glebe-houſes, the queſtions are anſwered in the firſt chapter, under the *Diviſions* of the county.

SECT.

SECT. 17. *Whether the County has been actually furveyed—when and whether the Survey is publiſhed?*

IN the years 1774, 1775, and 1776, a furvey of the county was made out by Meſſrs. William and Conyngham M'Crea. A very accurate and well executed map was made out for the gentlemen of the county about the ſame time, which is always to be ſeen in the Grand jury room of the county, at the time of the aſſizes, for the purpoſe of inſpection.

Under the article, *Roads and Bridges*, I have taken notice of this ſubject, with reſpect to the manner of improving this map, to which I refer.

SECT. 18. *Weights and Meaſures, liquid or dry—in what inſtances are Weights aſſigned for Meaſures—or vice verſa.*

EXCEPT tar, and treacle or molaſſes, liquids are ſold by meaſure; theſe articles are generally ſold by weight. Honey is ſometimes ſold by weight. Selling by weight is preferred, in order to avoid waſte, becauſe thoſe glutinous ſubſtances adhere, in a great degree, to the veſſels, in which they are meaſured; ſo that, by firſt weighing

weighing the veſſels, in which they are intended to be put, waſte is effectually avoided.

Oats and potatoes are occaſionally meaſured, between parties in the country, but very ſeldom in the public market.

SECT. 19. *The Weight or Meaſure, by which Grain, Flour, Potatoes, Butter, &c. are ſold.*

GRAIN is commonly ſold by weight in the public market, but oats are uſually ſold by meaſure between farmers, and eſpecially ſeed-corn. Six ſtone, of 14lb. avoirdupois, is reckoned equal to a meaſure of oats, and three meaſures, or eighteen ſtone, to a barrel. When bought or ſold by weight, the price is commonly ſettled by the ſtone. Seven ſtone is conſidered equal to a meaſure of barley, and three meaſures, or twenty-one ſtone, are equal to a barrel; this is alſo uſually contracted for by the ſtone. Twelve ſtone is a barrel of malt, which is always ſold by weight. Barley is ſeldom ſold at the public market; private diſtillers buy vaſt quantities of it by private contract, and by ſample.

Flour is ſold by the hundred weight, of eight ſtone, or 112lb.; it is alſo retailed by the ſtone, and by the pound.

Oatmeal

Oatmeal is almoſt univerſally ſold by the peck of 10lb. by retail; twelve pecks being equal to the long hundred, or 120lb., which is the uſual ſtandard for oatmeal. In ſome parts oatmeal is ſold by the ſcore, which is equal to two pecks, twenty of which are conſidered a barrel of meal, being equal to 3 cwt. 2 qrs. 8lb. of the ſhort hundred, or 112lb.

Potatoes are generally ſold at market by the ſtone, but the farmers ſell large quantities in the country by the meaſure, which is reckoned equal to eight ſtone; but, when heaped, as is the uſual cuſtom, the meaſure generally exceeds nine ſtone. A meaſure of potatoes weighs more in winter, than in ſpring or ſummer; the ſame remark will hold good for oats. Oatmeal certainly encreaſes in weight by age, but ſince that article is ſold by weight, there is no danger of the poor ſuffering. In general, throughout the county, forty ſtone of potatoes is equal to a barrel.

Freſh butter is uſually ſold by the pound of eighteen ounces; but ſalted butter is ſold by the ſtandard pound of ſixteen ounces.

Flax-ſeed is always ſold by the gallon when retailed, and by the hogſhead when ſold by wholeſale. The hogſhead contains from ſixty to ſeventy gallons.

Hides and tallow are ſometimes ſold by the ſhort hundred, or 112lb., and alſo by the long hundred, or 120lb.; either of which cannot affect the buyer or ſeller, as the price by the pound is always underſtood.

Candles

Candles are ſold by the pound, and ſoap by the ſtone and the pound.

Notwithſtanding the murmuring, reſpecting weights and meaſures in other counties, I think in this county there is no juſt cauſe for complaint, ſince the pound of ſixteen ounces, and the ſtone of fourteen pounds, are ſo well underſtood, by which the foregoing and many other articles are governed. I ſcarcely know of any exception, unleſs in wool and freſh butter; the former is rated at 16lb. to the ſtone, and, whether ſold by wholeſale or retail, the price is generally governed by the pound.

APPENDIX.

An Account of Lord Mountjoy's Improvements at Raſh, and the manner of carrying them into execution, from the year 1778, *to the preſent time.*

SECT. 1. *Seminary and Nurſery.*

EARLY in the year 1778, the firſt ideas for the improvements took place; but, for the two firſt years, little more was done, than the eſtabliſhing of ſeminaries and nurſeries, which, conſidering the great extent of the deſign, required to be upon a large ſcale. It was not the ſupply of the demeſne alone, to raiſe trees for, that was in contemplation, but that of many large maſſes of planting throughout his Lordſhip's eſtates in this county, amounting, in the whole, to about 36,000 plantation acres. Thoſe objects, with that of being able to ſupply a numerous tenantry with ſuch foreſt-

trees as were found ſuitable, required to keep up extenſive and regular courſes of ſeminary and nurſery.

It was ſoon found neceſſary to eſtabliſh nurſeries in various parts of the demeſne, in order to ſave the expence of carriage, and alſo to give the young plants a habit, from their infancy, to bear the different expoſures they were intended for, with a certainty of ſucceſs. This ſcheme was found to anſwer completely; indeed, upon ſo large a ſcale, it would be wrong to confine the nurſery to one or two particular ſpots.

The Right Hon. John Foſter, no doubt, was the firſt who eſtabliſhed nurſeries and ſeminaries, to any great extent, in his own demeſne at Collon, in the county of Louth; and it is to him alone we are indebted for this, and many other ſalutary inſtitutions.

The late Lord Mountjoy was one of Mr. Foſter's earlieſt pupils, with reſpect to planting; and time and perſeverance have ſhewn, that his Lordſhip made a rapid progreſs, not in planting alone, but in various other improvements, ſuch as draining, encloſing, laying down grounds of various deſcriptions, embanking, &c. Theſe, with ſeveral other improvements (many of which fall within the plan ſuggeſted by the Society), I ſhall in this place endeavour to make clear.

At the commencement of the improvements, vaſt quantities of ſeedlings were ordered from Scotland and other parts. This was done with a view of ſaving, or rather gaining two ſeaſons, as the plants, ſo purchaſed, were

were ſuppoſed to come round for planting out for *good*, two years ſooner than thoſe raiſed from ſeeds ſown at the ſame time that the ſeedlings were ordered. In ſome inſtances this precaution anſwered; but, in general, the ſeedlings, raiſed upon the ſpot, proved vaſtly ſuperior to any of thoſe imported; and at this time (1802) there is no compariſon at all between the ſeedlings, got from Scotch and Engliſh nurſeries (generally two years old), and plants raiſed here from the ſeed, notwithſtanding the difference of two years in point of age.

In ſix years we find, that ſeedlings in general, raiſed upon the premiſes, get the aſcendancy over two-year-old ſeedlings, which were imported, and put into nurſery the ſame day the ſeeds were ſown; ſo that it is much better to wait patiently for the coming round of the plants raiſed upon the ſpot. The truth of this aſſertion I ſhall ſubmit to any of our great planters, who are in the habit of importing ſeedlings, and have alſo eſtabliſhed ſeminaries of their own.

What is here advanced is principally with reſpect to ſeedlings imported from Scotland and the north of England; as I would by no means have it underſtood, that there could be any material loſs, in point of time, ſuſtained by purchaſing ſeedlings from Iriſh nurſeries, when ſituated at a reaſonable diſtance, and when care be taken in packing, and diſpatch uſed, between the times of taking up the ſeedlings, and putting them into the nurſery, or, what anſwers fully the ſame end, the moulding

moulding of them ſecurely till put out. Between theſe, and plants raiſed from the ſeed in the planter's own nurſery, there will be found very little difference, provided the qualities of both are equal; this I know from long experience.

SECT. 2. *The general Plan of ſettling the great outlines of the Demeſne and its appendages.*

HAVING ſettled the general plan for ſeminaries and nurſeries, the next care was to aſcertain the great outlines of the demeſne, with the appendages and interior plantations.

This was not the work of a *day*; many days and hours were ſpent on this ſpeculation, with cloſe application and intenſe ſtudy. At length the general plans were ſettled, and the work went on regularly and pleaſantly.

The demeſne contains about two thouſand Iriſh plantation acres, with many conſiderable appendages. It was alſo in contemplation to plant between three and four thouſand acres in ſtrong maſſes throughout the eſtates. Though the latter was ſettled, and regularly regiſtered, yet it was only intended as a *ſtock* to work upon, when a great redundancy of nurſery-trees could be ſpared from the improvements of the demeſne,

meſne, &c., or when the works of the demeſne ſhould be brought to ſuch perfection, as to be able to undertake the intended plantations throughout the eſtates.

At this time (1802) the demeſne and its appendages are ſo far advanced, that the planting of about fifty acres would complete the whole, and this in grouping and ſlender plantations, as finiſhing touches, the great maſſive planting being all completed.

It is not eaſy to ſay with accuracy, how many acres there are of ſolid planting, as every ſeaſon there are more or leſs planted, which never fall within the premium planting, or that reported to the Dublin Society. I am ſure I may not be far from the truth if I ſay five hundred acres; though, by taking a ſuperficial view, it would appear as if one half of the whole extent had been planted; but this circumſtance is owing to the ſwelling and undulating diſpoſition of all the grounds, both in the demeſne and its environs.

This account may ſerve to ſhew, what induſtry and perſeverance can do in a ſhort time. Twenty-two years back, from the preſent year (1802), may be conſidered the commencement of the improvements; and, for progreſs, and high preſervation, I am ſure they are equal to any in the united kingdom. Raiſing ſhelter, judiciouſly improving the ſoils, planting out young, and adapting the plants to the ſoils and aſpects, were the great objects to attend to, and which were the principal means of the rapid progreſs,

progreſs, made by all the plantations belonging to Lord Mountjoy. But I need not have ſaid any thing with reſpect to the progreſs, as this point ſufficiently proves itſelf.

During the above period, I can to a certainty declare, that it did not exceed five pounds to make any alteration or deviation from the general plan, firſt digeſted and arranged. Hence the good effects ariſing from ſetting out upon a cool, mature, and deliberate plan. I wiſh the ſame could be ſaid, with propriety, of all the improvements throughout the kingdom.

The nurſeries, &c. being ſettled, there was no time to be loſt for encloſing, and preparing the ſoils intended to be planted. It was a general rule to encloſe and plant the higheſt and moſt expoſed ſituations firſt, which are chiefly the weſt, ſouth-weſt, and north-weſt, theſe being the points moſt neceſſary to guard againſt. Another rule was much attended to, namely, to encloſe ſome time before the planting took place, and alſo, to drain, where the ſoil required it. It was very common to encloſe and drain for three ſeaſons before the planting commenced, by which means the nature of the ſoils was entirely changed; ſhelter and draining having acted ſo powerfully, and the furze-ſeeds, ſown on the backs of the ditches, becoming complete ſhelter in three years; and the ſtuff, caſt out of the drains, went a great way in deepening the ſoil. But more of this in its proper place.

SECT.

SECT. 3. *Modes of enclosing.*

1. Common ditches.
2. Louth fences.*
3. Sunk fences.
4. Drains in boggy and swampy situations.
5. Living fences, without a gripe or a trench.
6. Temporary dead fences, made principally of Scotch fir, cut down at the age of ten or twelve years.
7. Common paling, by post and rail, and by sheep-hurdles.

1. The common ditch is chiefly adopted for all the interior parts of enclosures and plantations. The gripe is generally seven feet wide at top, and two feet at bottom, and, where the soil will bear it, five feet deep on the perpendicular. An off-set or scarcement† is always introduced, from six to twelve inches broad, according to the nature of the soil, or the position of the bank; if the ground falls away from the bank, six inches for off-set will answer; if the reverse, twelve inches are generally allowed; and, if the bank be on level ground, or

* So called by the writer, from a specimen seen by him, many years ago, at Rosy Park, in the county of Louth, upon a small scale, but executed in a neat and workman-like manner.

† A common phrase in this county for an off-set.

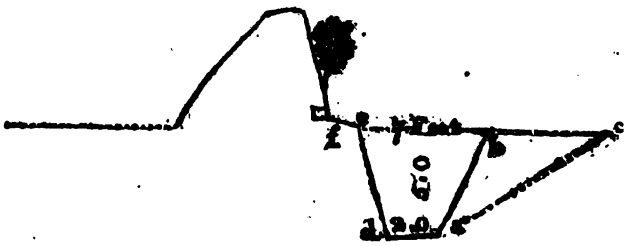
or nearly ſo, between ſix and twelve inches are uſually left.

Upon a great ſcale, the expence of weeding ditches, for three or four years after they are made, becomes very conſiderable; this expence is in a great meaſure ſaved, by introducing a courſe of ſtones from ſix to twelve inches high; but, previous to this, all the vegetable ſoil of the off-ſet, and, alſo, the ſoil to the thickneſs of the courſe of ſtones, is caſt back, to be convenient to bed the roots of the thorn quicks in. Another ſmall courſe of ſtones is generally laid over the quicks, after being ſecurely bedded in good ſoil. By uſing theſe precautions, and always planting ſtrong thorn quicks, never leſs than four years old, having been two years tranſplanted into nurſery before they are put into the ditches, the expence of weeding becomes next to nothing; and, even if the whole face of the bank ſhould moulder away by the weather, the quicks are never injured, as the ſtones effectually ſecure the roots, which, in the common way of ditching, without off-ſet or ſtones, never fail to be materially injured.

The only objection people in general have to this kind of ditch, is, on account of cattle, particularly ſheep, being able to walk along the off-ſet; a few ſtones, laid on the off-ſet, may prevent this, or, for want of ſtones, a ſlight bearding of bruſh-wood of any ſort. A better hedge is obtained in two years, by planting four-year-old quicks, than can be in four years, by only

only planting two-year-old quicks. Timber-trees are ſeldom planted with quicks in the demeſne.

The ſhape of the ditch, when finiſhed, is thus.*



In a few years, when the hedge becomes ſtrong, which is moſt commonly the caſe the third year, the ſpace *a*, *b*, *c*, according to the line *a*, *c*, is ſloped and dreſſed, and ſo is the bank *d*, *e*, to the ſtone-courſe at *f*. Both ſlopes are dreſſed with the ſward, between *b*, and *e*, and ſwarth borrowed from any neighbouring ſpot; but, when the ſward is ſcarce, hay-ſeed will anſwer; it is common to uſe the ſward on the face of the bank from *d*, to *e*, and ſow the ſlope, *a*, *c*, with hay-ſeed.

This mode always produces a good effect, and it is very evident it is economical. It is chiefly confined, however, to where the ſoil is diſpoſed to wet or moiſture; for, where it is perfectly dry, and there is no hazard in filling the ditches, the hedges are cut down at

* Coſt from 2*s*. to 2*s*. 6*d*. by the running perch; and, when the ſloping and dreſſing takes place, the price by the perch is from 4*d*. to 6*d*.

at once, after they have attained to ſufficient ſtrength, and the banks levelled in. The dead thorns are placed to the front of the quick-line, about two feet from it, which effectually ſecures the young growth from cattle, till it becomes ſufficiently ſtrong, which is moſt commonly the caſe in two or three ſeaſons. This anſwers very well, where there is no temptation to carry off the dead thorns for fuel, but here turf is in great plenty. In placing the dead hedge, it leans ſomewhat outwards from the living hedge, which makes it more ſecure againſt cattle, and admits of more air, as the living hedge advances; a circumſtance which ſhould always be attended to, from the moment the hedge is cut down.

In ſome inſtances, hedges have been cut down within about three feet of the ſurface, and the ſide-ſhoots of what remained worked in to thicken it. I am not an advocate for this ſyſtem, as a complete fence afterwards is with great difficulty inſured, ſince a regular taper-faſhion, from the bottom, cannot, without much trouble and expence, be accompliſhed; whereas, by cutting down the hedge at once, all this inconveniency is avoided, ſince the young growth may be eaſily managed, and kept within bounds. However, where perpetual fences are neceſſary, which, in paſture and meadow grounds, muſt be always the caſe, and where there is a hazard of carrying away the dead hedges for fuel, the cutting down of hedges, at a certain

tain diſtance above the ſurface, ſeems to be the moſt rational mode.

2. *Louth fence.*—Inſtead of a wall, built of lime and ſtone, this ſpecies of fence has been adopted ſeveral years ago; firſt, on account of its being one-third cheaper built than a wall; ſecondly, it can be executed by common labourers; and thirdly, as it may be planted with thorn quicks when found neceſſary.

It was calculated, that a ſtone wall, of eight feet from the ſurface, would coſt 2*l.* 8*s.* 3*d.* by the running perch. Upwards of two miles of the Louth fence have been made, and the average did not exceed 16*s.* by the running perch. In a circuit of between ſeven and eight miles, which is about the extent of the demeſne-fence of Raſh, the difference between 16*s.* and 2*l.* 8*s.* 3*d.* amounts to a large ſum; but the applying ſo much money among the labourers of the neighbourhood, inſtead of maſons indiſcriminately collected from many parts, was an object of conſequence to the labouring poor, which the ever to be regretted late Lord Mountjoy never loſt ſight of.

The under ſketch may ſerve to give the reader an idea of the manner of building this kind of fence:

2. 6

To every foot in height, there are two inches and a half of a batter or ſlope, in the face of the ſtone work from *a* to *b*, making in the whole one foot, eight inches, from the perpendicular; the thickneſs of the wall at bottom is two feet ſix inches, and reduced to about ten inches at top, which is always covered with a ſod, to project a little over the face of the wall, and may be produced to any length down the bank, or the back F.

If the triangle *a d c*, be not found ſufficient to form the bank F, the ground may be excavated further to *g*, or towards it.

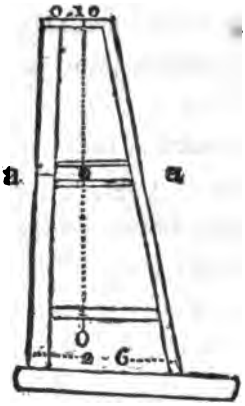
This ſketch is repreſented as if built on level ground, or nearly ſo. When the ground riſes bold behind the fence, leſs ſtuff will be neceſſary to form the back, and *vice verſa*. The cheapeſt way of building theſe fences is,

is, when they are placed againſt the hill, and in ſuch ſituations there is no hazard of finiſhing them off at once; but when the whole of the back muſt be formed, as is the caſe in the annexed ſketch, two ſeaſons are neceſſary to complete them, in order to give the mould time to conſolidate.

The greateſt care muſt be taken in building this kind of fence by a frame or gauge, which muſt be reduced on one ſide, and perpendicular on the other; or, if the back part of the frame leans a little from the perpendicular towards the wall, it will be found ſtill better. But the ſafeſt manner of building this kind of dry wall is, to have the frame in two parts, one four feet high, and another about three feet, which, with a double courſe of ſods, will raiſe the wall to nearly eight feet, which is the height uſually adopted here. In making the gauges, the beſt way is firſt to make one to the full length of about ſeven feet and a half, and cut it after to the lengths required; this will be found the moſt accurate way. A range four feet high may be firſt carried on to any length, and afterwards come on with the ſecond range, in which the ſhort gauge is to be uſed.

Perhaps

Perhaps the under ſketch may ſerve better to explain this, than all I have ſaid.



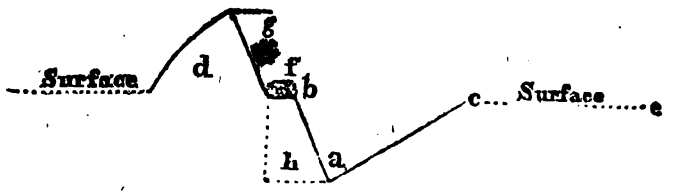
After the frame be made, it may be cut at *a*, *a*, which is the ſureſt method to have it made accurate; however, where the back requires but little ſtuff to be caſt to form it, and that it is intended to finiſh off in one ſeaſon, the frame may be left of the whole length, and, in that caſe, one of the croſs bars at *a*, *a*, may be omitted. In any caſe, the workmen will prefer the ſhort frame, as it is more manageable than the other.

From what has been remarked, the ſituation muſt always determine the depth of the ground to be cut away; in proportion as the bank riſes behind the wall, the more cutting will be neceſſary, and the leſs filling will be required. Where the ſituation is level, or nearly ſo, two feet below the ſurface is the uſual depth

to

to ſink for the foundation, and the ground afterwards ſloped ſo far as may be found neceſſary to form the bank. I by no means adviſe that any ſtuff ſhould be collected from behind the wall, to aſſiſt the forming of the bank, where there might be any hazard of injuring the ſoil when intended to be planted, or that it had been already planted, which here is almoſt univerſally the caſe as far as this kind of fence is completed, or where it is intended to be introduced.

At Raſh the planting has gone on ſo rapidly, and particularly on the weſt and north-weſt aſpects, where the Louth fences are principally adopted, that to wait for the completion of them would keep the plantations back, and retard their progreſs. Common ditches were therefore adopted and introduced, exactly in the direction in which the Louth fences were to run. In this caſe the only object was to form a ſtout bank, with an off-ſet, and quicked as formerly deſcribed, without ſetting any regard to the depth or form of the gripe, the depth of which ſeldom exceeds three feet; the reaſon of which ſhall preſently appear from the following ſketch.



 The

The ſolid, *a*, *b*, *c*, is made uſe of for the back *d*; or as much ſtuff as may be neceſſary may be procured towards *e*; *f*, ſtones or bruſh-wood to ſave the quicks *g*, and prevent cattle from creeping up on the face of the ditch.

After ſome time, when leiſure ſerves to build the Louth fence, the ſolid lump *b*, is cut away, which admits of a ſure and ſolid foundation for the ſtone-work. But, the ſeaſon before this operation is to take place, in caſe the quicks ſhould have got too ſtrong, it is neceſſary to cut them quite cloſe, in order to have a young growth, capable of being bent down in a horizontal direction, to comply with the ſtone-work. But when the ſtone-work reaches within about three inches of the quick, a thin ſod ſhould be laid on the ſtones; the ſame precaution ſhould be uſed over the quick, which prevents it from being cut or *galded* by the ſtones either above or below, which would ſoon be the caſe without taking this remedy. I ſhould have remarked this precaution before, in building theſe fences, where temporary ditches are not in queſtion; but it would naturally occur to any intelligent perſon, who has ſeen any fences faced with ſtone, where the quicks are perpetually breaking off for want of a free circulation of the ſap.

For my own part, I am a great advocate for this kind of fence, as an outward boundary to a demeſne. Even without being quicked, it is proof againſt man

or

or beaſt, and is certainly leſs ſubject to decay than a wall built of lime and ſtone.

Beſides its cheapneſs and ſimplicity, there is another object, ſufficient to recommend it. The beauties of plantations and dreſſed grounds are, in a great meaſure, loſt to the ſpectator from the outſide of a demeſne, by a continued dreary wall, which never fails to tire the imagination, and offend the eye; the Louth fence may be occaſionally kept low, ſo as in ſome meaſure to partake of a ſunk fence; and, if quicking the face be adopted, which I by no means inſiſt upon, the quicks are eaſily kept down to the level of the wall.

3. *Sunk fence.*—Situated as the demeſne is, this kind of fence was obliged to be adopted, and that upon an extenſive ſcale. A public road of great reſort accompanies the demeſne for upwards of two miles, which, being common to ſeveral of the approaches, and being fortunately placed ſo as to give no offence, or in any part of it to appear a nuiſance, was of courſe continued, and widened from the original breadth to that of ſixty feet; or at leaſt it is now ſo far advanced, that little remains to complete it.

As the demeſne lies on either ſides of this general approach, and the views to the grounds, the river, and the plantations, with many other intereſting objects, are ſo numerous and exquiſite, that it was judged unpardonable to conceal any object, that could be ſhewn to advantage, ſunk fences, therefore, were

adopted, and have been already carried on to a conſiderable extent, and are at preſent in a progreſſive ſtate.

Hitherto the expence of the ſunk fence was found to be nearly the ſame, by the running perch, as that of the Louth fence, namely, about 16*s*., divided as follows; 4*s*. for the excavation, 10*s*. for ſtone-work, which includes quarrying, drawing, and building, and 2*s*. for ſloping, dreſſing, and ſodding.

In ſeveral parts, ſmall bogs and quick-ſands occurred. In ſuch places, great precaution was neceſſary to ſecure the foundation, which was done by bedding ſtrong hurdles, made principally of oak, under the ſtones; the hurdles are commonly four feet broad, and the centre of the wall is always placed on the centre of the hurdle. The largeſt ſtones are made choice of for the foundations, both for this and the Louth fence, and more particularly ſo in ſoft ſoils, or where there is any hazard of one part ſubſiding more than another. Another precaution was found neceſſary, both in caſes of Louth and ſunk fences, namely, two ſeaſons are allowed to finiſh the ſtone-work, where the foundations are not good, or appear doubtful. The wall is generally raiſed three or four feet high the firſt ſeaſon, and the year following is finiſhed off. It was alſo found neceſſary to leave a ſmall ſpace unbuilt, at the junction of the firm and boggy ſoils, as the wall, when built on the latter, was always found

to

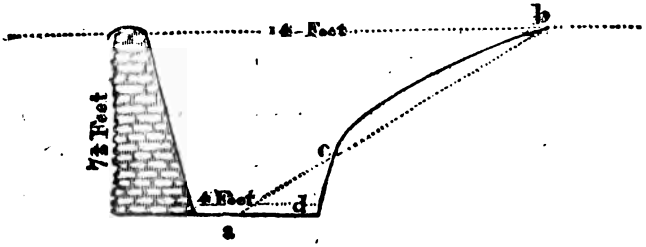
to ſubſide conſiderably, and, of courſe, drag the work on the hard ground with it, without being thus guarded. When the ſettlements are found to have ceaſed, then thoſe opens may be filled up, but not till *then*.

The reducement, or *batter* to the front, is the ſame as that allowed to the Louth fence, and the back of the wall is kept perpendicular, or rather inclining a little from the perpendicular towards the centre, as formerly remarked in the Louth fence. Workmen ſhould be narrowly watched with reſpect to this part of the work; they think, when a fair regular ſection is made in the bank a conſiderable way, that it may be fully ſufficient to guide them; and that, if the ſtone-work ſhould even lean a little towards the bank, ſo as to paſs the perpendicular, no material accident would take place; I know, however, from experience, that, in the hardeſt and firmeſt ſoil, this practice cannot be depended upon; ſo that the gauge and plummet muſt be always attended to.

So much for ſunk fences in point of ornament; or rather (here), as to their admitting to view innumerable ornamental objects, which, by adopting any other mode of fence, would be for ever loſt, at leaſt in ſome meaſure.

In the inclined plane, this fence differs ſomewhat from the common ſunk fence, by which means it is found more difficult to aſcend, which is the great point to guard againſt.

The



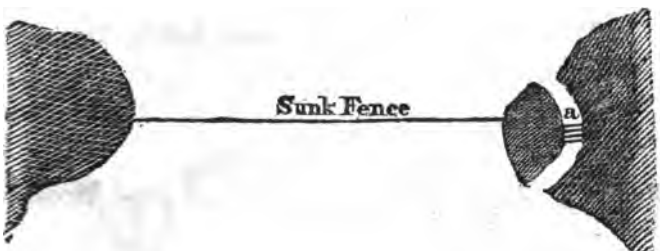
The ſlope of the common ſunk fence is uſually made according to the dotted line, *a*, *b*. It is plain, that a perſon has more power to get over the fence from the plane, *a*, *c*, than from any part between *c*, and *d*; becauſe, in the firſt inſtance, the perſon would naturally take advantage of ſome part between *a*, and *c*, to ſtep from; but any part of the ſpace between *c*, and *d*, is too remote from the wall to extend the legs.

There are a great many ſunk fences of ſmaller dimenſions, to turn cattle only, already completed throughout the demeſne; ſome in act of making, and others in contemplation. No ground can be better diſpoſed, to favour ſunk fences, than thoſe of Lord Mountjoy's demeſne. With other early regulations, thoſe of ſunk fences, to divide the grounds, both for profit and beauty, were not forgotten. All this was found neceſſary, previous to determining the various interior plantations, as, by ſo doing, ſome expence might be ſaved, in curtailing the length of the line of the ſunk fence, by projecting or making ſtrong prominences in the line of planting, without in the leaſt infringing on the line of beauty.

To

To divide the whole of the dreſſed grounds of the demeſne, will require near one thouſand running perches of ſunk fence, at 12*s.* a perch. What has been completed coſt about that ſum. The general dimenſions are; height of wall, ſix feet and a half; extent of excavation, from ten to twelve feet.

Here it is a very pleaſing circumſtance, that in all this great ſcene of dreſſed grounds, when completed, and divided by ſunk fences, not a ſingle bridge, or other contrivance, to lead from one diviſion to another, will be found neceſſary, ſo as to croſs the fence. Each extremity of every ſunk fence has fallen, or is intended to fall, in with ſome plantation; ſo that the communication, from one diviſion to another, is carved out through the plantation, in a curvilinear manner, ſo as to conceal the gate, which is always placed at the moſt prominent point of the curve.



a, The gate, made in the moſt ſimple manner, of a few aſh rungs, not much ſtronger conſtructed than a ſheep-hurdle, but made ſo wide, as to admit of a load

of

of hay or corn. Sometimes advantage is taken of ſome tree to hang the gate to, and it not unfrequently happens, that another tree may correſpond to ſhut it to; and there have been inſtances of trees falling in to anſwer for heel-poſts for the gate.

4. *Drains as Fences in boggy and ſwampy ſituations.*—Where it may be neceſſary to introduce fences of this deſcription, they muſt be done with patience and caution, as, if performed the firſt ſeaſon, they ſeldom ſucceed, being ſubject to ſlip and give way at the ſides, and to ſwell upwards at bottom.

The uſual mode here is to ſink them about two feet and a half the firſt ſeaſon, which is moſt commonly done in ſummer weather. The weight of the ſtuff, thrown out of the drain, ſerves to preſs out the water of the ſpace under it, and thus by degrees it becomes ſolid. In many caſes three ſeaſons are found neceſſary to accompliſh this buſineſs.

Thoſe fences are generally made double, forming between a ſpacious bank thus.

By thus intercepting the water on both ſides of the bank, it in ſome time becomes ſolid, and fit to nouriſh trees,

trees, chiefly alder, birch, mountain aſh, and woolly poplar, all of which are extremely uſeful for the country.

Not more than from a foot to eighteen inches in depth ſhould be caſt on the ſurface of the bank; in caſe it be a ſpongy red bog, more would render the whole a *caput mortuum*. Beſides the uſe of the ſtuff caſt on the bank, for the purpoſe of preſſing out the water, it alſo ſerves to rot the ſurface, and render it more capable of nouriſhing trees, than it would otherwiſe do, and to render the whole more fertile; all the ſurfaces are made to meet, that is, the ſurface of the bank, and thoſe of the drains.

By computing the area of the drains, and the ſolidity of the bank, or the ſtuff caſt up, it would appear, that, at eighteen inches deep, the latter would only be equal to about one-half of the former; experience, however, proves the contrary; ſo ſubject is all ſpongy bog to be reduced, when diveſted of the fluid, which, for the greater part, compoſes it.

The reader will pleaſe to obſerve, that the inner ſides of the drains are more ſloped than the outſide ones; the reaſon is obvious, as they have a greater weight to ſuſtain.

Two ſhillings a perch is the uſual price allowed for the large drain, and eight-pence for the ſmall one.

Furze has been found to ſucceed in thoſe banks, when they become ſufficiently dry, but rooted plants anſwer

anſwer better than the ſowing of the ſeed. Thoſe of two years old are always to be had in great plenty from the backs of new ditches, where they are moſt commonly too thick. Furze, in ſuch ſituations, not only ſerves the purpoſe of ſhelter, but alſo has a great power of abſorbing the crude juices.

It is ſcarcely neceſſary here to mention the preparation of the ſoils inſide of thoſe banks for planting, as that does not belong to the preſent ſubject, and ſhall be taken notice of in its proper place. I ſhall only remark, that the interior parts are carved out into a number of quarters by drains, the ſtuff taken out of which is always caſt on the ſurface, for the purpoſe of rolling it, as in the former caſe, but not near that depth, perhaps not more than three or four inches, as the caſe may require.

It is, however, of the utmoſt conſequence to the future proſperity of the whole of the interior planting, to ſet about early and vigorouſly with the fences, and outſide planting, which here I ſhall call a belt or ſcreen, to ſecure and bring forward the other parts.

5. *Living Fences without a gripe or trench.*—By living fences I mean ſuch as form a fence at once, planted on the ſurface, which are principally adopted in the beſt finiſhed parts of the demeſne, or in ſituations, which may forbid common ditches, or any ſpecies of clumſy fence. At Raſh theſe are numerous at preſent, and are intended to be carried on to great extent.

For

For this purpoſe the common white-thorn is chiefly preferred, of which regular nurſeries are every year formed, ſo as to have always a ſucceſſion, as the demand is conſtant. Here it is common to plant two ſucceeding crops of potatoes, after forming a plantation; this is generally performed by labourers, and for their own uſe, in ſituations convenient to them. After this treatment, the ſoil muſt be in fine order. The ſecond crop of potatoes is generally drilled. The ſtrongeſt two-year-old quicks are made choice of, and put out in lines at about four feet apart, in a meandering manner, to avoid the trees. Here the plants commonly remain three or four ſeaſons, but the firſt, and ſometimes the ſecond crops of potatoes or cabbages are planted in the intervals, which is always in favour of the quicks, and alſo of the plantations. By the time the plants have ſtood three or four years in the nurſery, they are generally four feet high, which is about the height wiſhed for. Hence it is plain, that little or no expence attends this practice, as the labourers manage it, on account of the crops. A few ſtraggling ſhoots annually clipped off, to give the hedge a taper habit, is the only expence, from the time of planting the nurſery, to that of the hedge.

One thouſand quicks will go over fifteen perches, and, at that diſtance, will form a very cloſe hedge.

One

	£.	s.	d.
One thouſand quicks I ſet down at - -	0	3	3
Digging and preparing fifteen perches of a trench, - - - - - -	0	2	6
Raiſing, carriage, and planting, - -	0	3	4
The value of the ſeed, and trouble in ſeminary, planting, nurſery, &c. - -	0	2	6
	£.0	11	7

This ſhews at a view, which I am ſure I have overrated, that fifteen perches of a complete fence may be had at once for 11*s.* 7*d.*

This ſyſtem, once eſtabliſhed, and regularly kept up, is well known to have cheapened the article *fences* to a great degree.

Honeyſuckle and ſweet-briar are always mixed with theſe hedges; a circumſtance not ſo eaſily complied with in making common ditches.

But here there is another reſource for forming hedges of this deſcription in a more expeditious manner, but not altogether ſo cheap.

In going over extenſive chains of plantations, it often happens, that the whole of any particular chain, or ſtring, could not be completed in one ſeaſon, nor perhaps in two or three ſeaſons; in ſuch caſes, to ſecure every ſeaſon's planting, croſs fences were neceſſary to introduce, though for only temporary purpoſes. All ſuch fences were planted with quicks, the ſame as the permanent fences, with this difference, that no

ſtones

ſtones were introduced at bottom. The object, in introducing quicks in thoſe temporary fences, was, in order to have them ready trained, and faſhioned for hedges in the courſe of a few years, when the uſe of ſuch fences became unneceſſary. The fact is, that hedges, thus raiſed, anſwered the ſame end as if they had been raiſed in a regular nurſery, and at ſomewhat leſs expenſe.

But, in order to eſtabliſh the roots equal to thoſe, raiſed in a regular nurſery, the backs of the ditches are in ſome meaſure cut away, ſo as to be able to get at the roots of the quicks, which are cut with a ſharp inſtrument within about a foot of the ſtem, and then two or three inches of freſh mould are put over the roots, which cauſes them to throw out a great number of additional fibres. In this ſtate the plants remain for two ſeaſons, by which time they are generally furniſhed with roots and fibres in as great perfection as they could have been in the beſt managed nurſery.

In ſome inſtances, where the ſoil is dry, and ſhelter is not eſſential, the ditches are levelled at once, and the roots cut and prepared as above ſtated; but, without thoſe advantages, the firſt method is always practiſed, ſince the part of the bank, left unlevelled, affords ſome ſhelter, and, by leaving the gripe open, keeps the ſoil in the uſual medium of dryneſs.

In

In order to ſecure ſtrong and durable hedges, to form fences at once, another expedient has been often practiſed with ſucceſs. The demeſne originally abounded with ſmall farms, many of which were well planted with white-thorn and ſome timber-trees, and, very fortunately, almoſt all the ditches were either curved, or otherwiſe meandered, ſo as ſeldom to appear ſtiff or formal. In levelling thoſe ditches, many of the timber-trees and old thorns were of courſe ſuffered to remain. Indeed the whole of the latter was left undiſturbed at the time of levelling the ditches, and their roots prepared by ſhortening them, and uſing a large portion of rich ſoil to excite plenty of new fibres.

Such thorns, as were judged proper objects to ſtand for *lawn plants*, were not touched or *doctored** at the roots; the tops were only lightened, and ſo faſhioned, as to give them a propenſity to ſpread, which requires both ſkill and pains, and a little patience. But ſuch thorns, as were intended to form new hedges, were cut down within three feet of the ſurface, and, in two ſeaſons after, were formed into hedges, with as much ſafety as plants of four or five years of age regularly raiſed in a nurſery. Hedges, of forty years ſtanding, have been thus managed here with the greateſt ſucceſs.

But

* A phraſe of the writer, which he wiſhes to have underſtood generally in preparing large plants for ornament.

But thorns, thus prepared, anſwered here another material end, namely, the ſecuring of ſcattered, grouping, or detached trees from cattle. Upon a large ſcale, there would be no end to the expence and repairs of common paling, and, even when done in the beſt manner, it carries with it a ſtiffneſs and ſameneſs, that never fail to give offence. Either black or white thorn removes every inconveniency of this nature; and this ſcene is further embelliſhed by planting with the thorns honeyſuckle and ſweet-briar, a mode generally purſued in forming hedges of every deſcription, and eſpecially near places of reſort.

The ſame conſideration, of *dacloring* thorns, naturally led to another; it was ſoon found out, that every kind of foreſt-tree, with care, was capable of being treated in the ſame manner; ſo that here that ſyſtem was put in practice fourteen or fifteen years ago, and has been ſince carried on, more or leſs, every year, according to the number, that may be neceſſary to keep up a ſucceſſion, or rather to be in readineſs as the grounds are laid down.

The method, principally adopted of late years, is, to leave a ſufficiency of ornamental plants in nurſeries at the ſeaſon of thinning them. When left about ſix or eight feet ſquare, crops of potatoes are occaſionally introduced, the neceſſary preparation for which ſufficiently prepares the roots of the trees for the foregoing

ing purpoſe. This ſyſtem, for many reaſons, is better than the former.

The method firſt purſued was, to ſelect ſuch plants, as were deemed proper objects for ornamental planting, through the plantations, that had been formed ſome years before. Oak, ſycamore, wytch elm, beech, lime, and wood-maple, are generally made choice of; the height commonly from eight to twelve feet. At the time of *doctoring* or managing the root, the head is alſo attended to, by ſhortening, if neceſſary, and cutting away aukward branches, and alſo giving room, ſo as to enable the plant to ſpread before it be put out for good. But here it is neceſſary to remark, that neither the prepared thorns, nor the trees to be protected by them, ſhould by any means remain longer than two ſeaſons between the time of *doctoring*, and that of planting out; otherwiſe a ſecond operation will be found neceſſary, which, of all things, ſhould be avoided.

For a tree of the foregoing ſize, with five or ſix ſtout thorns to protect it, a hole of eight feet in diameter is generally allowed, more or leſs, according to the ſize of the roots. Old *doctored* thorns generally carry bulky roots, on which account the hole requires to be large; indeed the holes cannot be too large. When the ſoil is poor, two or three carts of good earth are introduced. Planting, according to this mode, almoſt univerſally requires additional ſoil.

In

In countries where thorn-quicks are ſcarce, which is always the caſe throughout this county, much might be made by attending to the ſuckers produced from the roots cut off, in ſtubbing and levelling ditches. Thouſands of fine plants ſpring forth from the roots left, and thoſe are always produced near where the inciſion was made, or where they have been maimed. The more the roots are cut and mangled, the more abundant will be the crop of young thorns. If the roots are cut into lengths of a few inches, and covered with two or three inches of good ſoil, in a bed or drill, they will produce fine plants; but this is not peculiar to the white-thorn.

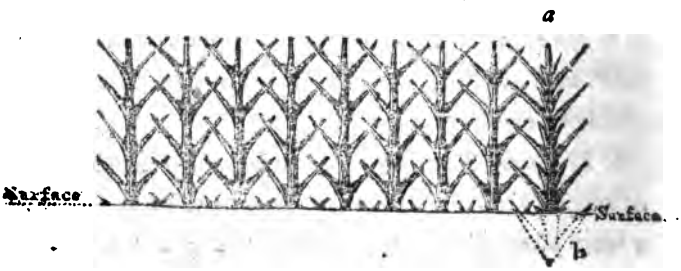
To thoſe of extenſive experience in country buſineſs, the foregoing hint may be deemed unneceſſary; but, to this county in particular, it may be of ſome uſe. Five hundred plants, thus raiſed, will reach further in a ditch, than one thouſand ſeedling plants of two years of age, and will make a completer fence, in a ſhorter ſpace of time. Of this particular many of Lord Mountjoy's tenants are thoroughly ſenſible, as they would prefer the ſuckers to the ſeedlings, though they ſhould be at the expence of collecting the former, while the latter were ready counted to their hand without any trouble or expence.

6. *Temporary dead fences, made principally of Scotch fir, cut away at the ſize of eight or ten feet, or when it begins to injure plants of more value.*—Very ſtrong and formi-

dable fences, againſt man and beaſt, are made of this article. They are now only beginning; but, from the great quantity of fir and other trees that muſt neceſſarily be cut away, this ſpecies of fence no doubt will be generally adopted, eſpecially in backward and remote parts of the demeſne, and in the other improvements.

I call it a *chevaux-de-friſe* fence; it is made ſimply thus. A trench, about two feet deep, and three feet wide, is dug out, in which the trees are placed upright, generally about two feet apart, ſo that when the branches are cut, at about the diſtance of eighteen inches from the ſtem, they will croſs each other, forming alternately both acute and obtuſe angles, and alſo projecting the *horn-work* at front and rere. The lower tier of *horns* are always let down below the ſurface, the better to ſtrengthen the fence; and, when the mould is put in, the whole is well rammed, in performing of which much pains muſt be taken, leſt any of the *horns* ſhould be broken, which would ſpoil all.

The under ſketch may in ſome meaſure aſſiſt the reader, in forming an idea of this ſingular ſpecies of fence.



The

The Scotch fir, *a*, is only repreſented as having the whole tier of branches, which, in the execution, is the caſe throughout. The dotted lines, *b*, ſhew the part of the fir under the ſurface, where part of the lower tier is repreſented alſo below the ſurface, to keep it firm, as has been already obſerved. In ſome caſes the whole of the lower tier is below the ſurface, and when that takes place, the fir is let down to the ſecond tier; this is neceſſary in boggy or ſandy ſoils, which may be difficult to compreſs.

In forming this kind of fence, the laſt two years growth is cut away, being conſidered too weak. In general, two years growth is below the ſurface, and the growth of four or five years appears above it, after cutting off the weak growth.

It is ſcarcely neceſſary to remark, that the more luxuriant the trees are, the greater the diſtance they may be placed aſunder, and *vice verſa*.

In dry ſituations, permanent fences of thorn, beech, &c., of a ſmall ſize, are generally placed behind this *chevaux-de-friſe* work, which, in the courſe of four or five years, becomes ſubſtantial enough to guard againſt cattle, this being about the period the temporary fence will laſt. In moiſt ſituations, alder and mountain-aſh are introduced, and, after being two ſeaſons planted, are formed into a kind of hoop, four feet above the ſurface, which is found to make a complete fence againſt cattle, when the other has gone to decay. In

many inſtances, honeyſuckle, ſweet-briar, all ſorts of common briar, dog-roſes, &c. are let in with the temporary hedge; this contraſt produces a moſt ſtriking effect, and, by the time the dry hedge is decayed, thoſe articles become a moſt formidable fence. When this plan is adopted, which muſt be always in dry ſoils, the back hedge is altogether omitted.

On the whole, this is a very cheap fence, ſince it is attended with little more trouble than that of planting a common hedge. When hedges are to be formed behind, the beſt way is to open the drill or trench, to the breadth of five feet, by which means both the dead and the living hedges may be carried on together, and thus prevent the opening of a ſecond trench, which would only ſerve to looſen the ground about the *horn-work.**

The ſtuff, uſed in this fence, is not ſufficient for ribs for cabins, ſheep-hurdles, common paling, &c.; and as it muſt be cut away at certain periods, it would, of courſe, go to loſs, to prevent which, the above uſe is found the moſt eligible.

7. *Common paling of poſt and rail, ſheep-hurdles, &c.*—Except to encloſe corn and hay-ſtacks, turf, &c., very little uſe is made of common paling: the foregoing fence ſuperſedes it, and is performed conſiderably cheaper; beſides, the materials, neceſſary for a ſtrong paling, are ſold to the country-people, for cabin-building,

* This phraſe is ſometimes uſed inſtead of *chevaux-de-friſe.*

building, to conſiderable advantage to the proprietor, and with infinite ſervice to the whole country.

Great uſe is made here of ſheep-hurdles, not only for folding ſheep, but for many other purpoſes, ſuch as ſecuring the ſloping parts of ſunk fences, which have been made through dreſſed grounds, ſurrounding old quarries and ſand-pits, which require to be filled and dreſſed in ſome time after the ſurrounding grounds have been laid down, and where the uſe of them is found neceſſary after that operation.

For theſe, and a hundred other purpoſes, ſheep-hurdles are uſed; they are eaſily placed up, and ſoon taken down, when not wanted. Here they are made of oak ſaplings; it would be only throwing away time to make them of any other young ſtuff, which may neceſſarily be cut down, as they would laſt no length of time. Four ſhillings a dozen is the uſual price paid for making them, and a dozen will extend four perches in length.

Several other ſpecies of fence might be mentioned, according to ſituations and circumſtances, but the foregoing are in moſt general uſe.

SECT. 4. *Preparation of the Soils for planting.*

Many were the expedients made uſe of, to prepare the ſoils, and promote the planting of the extenſive and

and varied improvements of Raſh. The four following I ſhall briefly ſtate, being the moſt general.

1. Soils, that came within the power of the plough, were trenched by the Kentiſh wheel-plough, drawn by ſix bullocks in the yoke faſhion. This kind of preparation anſwered completely ſo far; but there was another object in view, namely, as the ploughing was performed deep, a vaſt number of ſtones were diſcovered and procured, which otherwiſe would have been for ever loſt; by this management they ſerved to build a great part of the Louth fence, already ſpoken of.

There were about fifty acres of this deſcription prepared for planting. The operation, it is true, was tedious; I dare ſay not more than a rood of ground daily was ploughed. The plough was attended by ſix or eight able labourers, beſides the ploughman and driver. The men were provided with long oaken poles, ſhod with iron, which ſerved as levers to turn out the rocks, which the plough diſcovered. Crow-irons were uſed for raiſing the ſmaller ſtones. All ſtones, that appeared above the ſurface, were previouſly taken up, and carried away before the ploughing commenced.

Upon the whole, this was found a cheap mode of procuring ſtones, as the parts where they were uſed lay very convenient. Had the diſtance exceeded a mile,

mile, this plan would have been given up, as ſtones regularly quarried would have come cheaper.

There is at this time a very material difference between the growth of the trees, where the ſoil was thus treated, and in ſimilar ſoils, which had no preparation at all. It is at leaſt as the proportion of ten to fifteen in favour of the trees where the land was ploughed; that is, trees planted ten years ago, where the ſoil was prepared as above, are now (1802) fully as forward as plants put out fifteen years back, without any preparation. How long this great aſcendancy may continue to prevail, time only will tell.

2. Large ſcopes of dry, hungry, ſhallow ſoils; ſome almoſt covered with broom, furze, and other ſpontaneous growths, in a ſtate of nature. But the greater part was formerly occupied by *little farmers*, who knew that their inheritance was only to be of ſhort duration, and, of courſe, worked out the ſoil to the loweſt ebb.

To trench or plough ſoils of the foregoing deſcriptions was thought unneceſſary, as that, of courſe, would only render them ſtill lighter, and, conſequently, unfavourable to planting.

In the firſt caſe, cloſets were formed through the native bruſh-wood, of different ſhapes and ſizes, ſo as to contain from ten to thirty plants, more or leſs, at about three feet apart, and often nearer, but ſcarcely ever to exceed that diſtance. Five thouſand plants to the acre are not

not uncommon in ſuch ſituations, where they are high, and much expoſed to the weſt, &c, which, indeed, is generally the caſe throughout all the elevated plantations here. In thoſe high ſituations, larch, beech, and Scotch fir are principally made choice of, and in all ſituations oak is never omitted, though in the dry hungry ones it gets on tardily for ſome years; but, through time, when ſhelter becomes eſtabliſhed, and the ſoil rendered firm and compact by being at reſt, it is ſurpriſing to find how rapidly the oak will get on; it ſeems ſuddenly to appear, after a certain period, as by enchantment.

The natural ſhelter afforded here, required much attention to make it uſeful, without becoming injurious to the young plants: it was neceſſary to have them narrowly attended, and to cut away all ſtraggling ſhoots of the ſpontaneous growths, that might whip, or otherwiſe injure the young plants. This work ſhould never be omitted before the commencement of the autumnal ſtorms, at which ſeaſon plants are apt to ſuffer moſt by the intruſion of their encroaching neighbours, which ſhould never be ſuffered to gain the aſcendancy over the new-planted trees; otherwiſe all is loſt without redemption.

In four or five ſeaſons the young plantations generally out-top the native growth; but it is neceſſary for ſome time longer to keep down the bruſh-wood, for,

ſo

ſo long as it finds air, it will get forward, and cauſe the lower parts of the young plants to become naked; ſo that the true way is never to ſuffer the ſpontaneous plants to get a-head in the cloſets; and the margins, left for ſhelter, may be taken away by little and little, as the young trees can afford. The nearer the Scotch fir are planted to each other, the ſooner the native plants will diſappear; but it is better economy to put in plenty of valuable timber at the beginning, than to depend wholly on Scotch fir, or any other ſpecies of pine, except the larch, ſince, in time, they make but a poor figure and return, in point of profit, when compared to others.

I believe it is ſcarcely neceſſary to obſerve, that, in thoſe and all other expoſed ſituations, without planting very young, there could be no chance of ſucceſs. Oak, beech, birch, hornbeam, ſycamore, &c. never exceed four years, being generally two years tranſplanted. Scotch fir and larch are commonly put out for good at three years, in which caſe they are put into nurſery at one year old; but this ſyſtem is only confined to the very expoſed ſituations.

Now that I am treating of expoſed ſituations, I ſhall mention a circumſtance of ſome importance, which occurred a few years ago, and which was the effect of chance, rather than of premeditated ſpeculation.

Some

Some ſeedling-beds of Scotch fir grew uncommonly thick and luxuriant the firſt ſeaſon. It was judged that, if let to remain two ſeaſons in the ſeed-bed, which is the uſual time, they would be of little or no value. The great luxuriance was cauſed by a large portion of turf-aſhes being uſed in the compoſt, a hint which has been ſince improved upon, and found of infinite ſervice for many kinds of ſeedlings.

A number of beds were prepared to receive the plants, which were intended to be thinned out. The plants were raiſed by a ſmall three-pronged fork, capable of raiſing only as many plants as occupied about two ſquare inches, perhaps from twenty to forty plants. In ſhort, about half the plants were taken up in this manner, and the void ſpaces immediately filled with good mould. Inſtead of bedding out the plants, thus raiſed, individually, they were planted out in ſmaller cluſters, from four to eight in number, more or leſs. Theſe cluſters were placed at about nine inches apart, ſome promiſcuouſly, and ſome in lines; the latter I recommend, unleſs the ſoil be extremely clean.

The plan propoſed was, that the plants bedded out ſhould be lined out, and formed into a regular nurſery the year following; but behold, when that was attempted to be put in practice, the ſcheme failed, for the roots were found to be ſo matted and interwoven together, that any attempt to ſeparate them was found impracticable, without injuring the whole. Of courſe they

they were ſuffered to remain for another ſeaſon, when they were put out for good in cluſters, without any attempt to ſeparate them.

The conſequence of this ſpecies of planting was, that in three years it made a fuller figure in expoſed ſituations, than planting in the common way had done in five ſeaſons. In ſuch ſituations what we want is, to cover the ſurface as ſoon as poſſible, and, of courſe, create ſhelter, and for both this method is extremely well calculated. It is idle to imagine, that we ſhould debar ourſelves from timber in future by following this plan; every experienced planter knows, that, if a ſeed-bed of any ſort was ſuffered to go on its own way, a ſufficient number of plants would ſurvive, and kill all the reſt; and in the preſent inſtance this is fully demonſtrated, ſince only one ſtem can now be traced from thoſe cluſters, which were firſt planted out here, being only ſix years prior to the preſent year (1802).*

Since the above diſcovery, this practice has been continued here, but is principally confined to Scotch fir, that being the beſt calculated for expoſed ſituations.

One

* This mode has an advantage over the common one, inaſmuch as the wind has little or no power of diſturbing the plants, they being balanced from the ſurface for ſeveral years. The writer never experienced an inſtance of any of this *cluſter-planting* (a name which he has adopted) ever yielding to ſtorms, whereas thouſands give way every ſeaſon when put out in the common way, and, in high moiſt ſituations, are perpetually looſening by ſtorms.

One hint begets another. Every kind of underwood may be put out in cluſters, or ſtrong bodies together, inſtead of planting it ſingly. Back grounds may be filled, in forming ſhrubberies, &c. with ſtrong maſſes of lilac, laburnum, ſyringa, &c.; and many other advantages may be taken, where ſhrubs and underwood are plenty.

I am not without ſome apprehenſions, that many of my readers will look upon this mode to be a moſt ſlovenly one, and, as it were, a wilful waſte of plants. So they may; but then it ſhould be conſidered, how much time is gained by this method, and how little is the hazard we run; beſides, Scotch fir is always a cheap article; ten thouſand plants may be procured from one pound of ſeed, which in Scotland ſeldom coſts more than three ſhillings. But to return to the ſecond part of this ſubject.

On the worn-out grounds, occupied by farmers and labourers, there was nothing more to do than to enclоſe and plant; as trenching or ploughing, as has been obſerved, would only ſerve to render the ſoil lighter, which was chiefly the greateſt fault of theſe grounds. Here, in general, ſhelter was to be created, which is uſually done by ſowing broom and furze-ſeeds, ſometimes in crooked or zig-zag lines, but moſt commonly in patches. The latter mode in general ſhould be preferred, as the broom particularly makes a conſpicuous ſhew the ſecond year, and, beſides the

ſhelter

ſhelter it affords, gives a warmth and chearfulneſs to the whole during the year round. The violence of the winds is more completely broken by ſowing in patches, than in lines, as the ſhelter, afforded by the latter mode, is only partial; the young plants are alſo more eaſily preſerved from being ſwitched by the broom, in caſes of patches, than in thoſe of lines.

Though heretofore the practice of ſowing furze-ſeed in patches has been adopted, yet the end, for which it was intended, had not always the deſired effect. It never makes ſo rapid a progreſs, or, at leaſt, is leſs conſpicuous in patches, than on the backs of ditches, in the ſame ſpace of time. On the back of a ditch it will make a figure, and afford ſhelter the ſecond ſeaſon; whereas, in patches, it performs little of either in leſs than four years, by which time the plantation generally affords itſelf ſufficient ſhelter. The end of anſwering the protection of game is alſo frequently defeated, and eſpecially where Scotch fir is thickly planted, which, in high ſituations, is here always the caſe. So ſoon as the Scotch fir begins to meet, from that period there is an end to any advantage ariſing from furze ſown with a view of ſhelter through plantations; ſo that, on the whole, broom ſhould be preferred for temporary ſhelter; but on the backs of ditches furze-ſeed ſhould be always ſown in preference to broom, on account of the great length of time it laſts when regularly cut. Here it is always ſown

broad-caſt

broad-caſt over the whole of the back of the ditch, ſo that one-half may be cut whilſt the other part remains for ſhelter, by which means complete ſhelter is never wanted. In four or five years after ſowing, the part of the furze next the thorn-quicks is commonly cut, which always gives the latter the aſcendancy for the time to come. A quart of ſound ſeed is fully ſufficient for thirty perches broad-caſt, but conſiderably leſs will anſwer, when ſown in a drill.

In this place it may not be amiſs to remark, that the Scotch fir, uſually put out in cluſters, as ſtated in this ſection, is moſt commonly planted in grounds of the latter deſcription, or thoſe formerly occupied by farmers and labourers, as not being much ſubject to luxuriant weeds, or to ſuch ſpontaneous growths as the former.

3. Thin, wet, ſpouty ſoils, in general much expoſed.

To encreaſe the depth of ſoils of this nature, and alſo to drain and render them wholeſome, for the reception of plants, were the chief objects to attend to.

From ſoils not more than three or four inches deep, with a hard ſubſtratum, almoſt impenetrable to water, little could be expected. Draining was found of little or no advantage to ſuch ſoils; in ſome meaſure it ſerved to carry off the redundancy of water, but very little encreaſed the depth of the ſurface.

Recourſe, therefore, was had to another expedient, which anſwered both ends, namely, draining, and deepening the ſoil.

One-

One-third of the ſurface was ſtripped, and laid upon the other two-thirds, cauſing the two ſwards to meet, the better to reduce them. This encreaſed the depth of vegetable ſoil from four to ſix inches, over which two inches more of the ſubſtratum was thrown up, which gave a depth, for planting, of eight inches. The laſt covering not only encreaſed the depth, but ſerved to give weight and ſtability to the whole.

In performing this work, it was of little conſequence whether the furrows and ridges were formed crooked or ſtraight; they were ſometimes one way, and ſometimes the other; the diſpoſition of the ground always directed the courſes of the ridges; up and down hill, where the land was not over ſteep or ſudden; but, where the ground tended abruptly, the direction was always carried obliquely to the hill, the better to prevent the ſoil from being waſhed away.

This mode varied according to circumſtances. Where the ſoil was much diſpoſed to moiſture, the breadth of the furrows was three feet, and that of the ridge ſix feet; but, in ſoils more dry, the breadth of both were encreaſed, in order to prevent the drought from taking place too much in the ſummer ſeaſon; a precaution which in many inſtances was very neceſſary, as nothing could be more eſſential than to guard againſt both extremes.

This work was always performed one year at leaſt before the planting took place, by which time the ſurfaces

faces of both the ridges and furrows were thoroughly reduced, and the ſtiff ſoil, which was caſt at top, had the full benefit of the winter's froſt and ſummer's ſun. As this work was generally performed in autumn, it frequently had the advantage of two winters and one ſummer, to ameliorate and form a good abiding ſoil, very fit for the reception of plants; conſiderably more ſo, than had it been planted the ſpring immediately after the operation.

Here it may not be amiſs to remark, that ſpring-planting is almoſt univerſally followed; experience having long ago pointed out, that thoſe ſoils and aſpects are not calculated for autumnal planting.

Ground, prepared as above, is generally managed for 2*l.* an acre; being at the rate of 6*l.* an acre, if the whole had got a thorough trenching, which practice at the commencement took place in raiſed trenching,* as it is termed. It was, however, ſoon diſcovered, that the raiſed trenching became too dry in ſummer; nor was the quantity of vegetable ſoil, that the ſituations afforded, applied ſo effectually for the nouriſhment of the trees, in the latter, as in the former caſe. Theſe conſiderations, with the great difference in point of expence, gave, of courſe, the preference to the former mode.

The

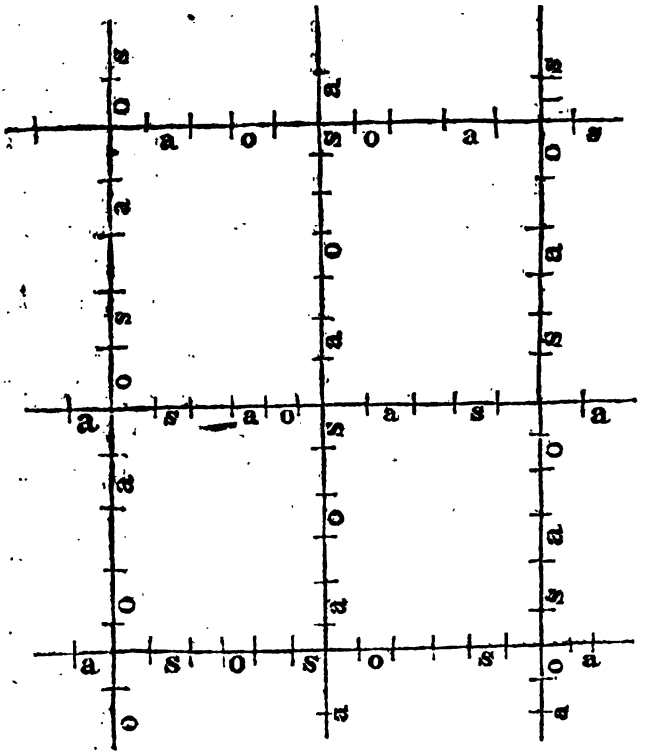
* Raiſed trenching is preferred in wet ſoils, and the trees are planted without levelling the ground, and left always in that ſtate.

The fourth and moſt univerſal ſyſtem of planting, in mountainous and expoſed ſituations, was purſued according to the following plan.

Small ditches were made in ſeveral directions, ſometimes crooked, at other times ſtraight, but moſt commonly of a winding diſpoſition, always taking an advantage of the ſituation and expoſure. There were three principal objects in view, namely, the draining of the ſoil; the creating of ſhelter; and ſecuring a ſufficiency of earth to nouriſh the trees. The more expoſed, the nearer it was neceſſary to introduce the ditches; but for brevity ſake I ſhall ſet down the average diſtance at twenty-one feet apart. An acre, according to this diſtance, contains 320 perches of ditch; and, by allowing fourteen trees to the perch, the number to the acre is found equal to 4,484; one thouſand of which, at leaſt, were always oak.

Oak, aſh, and ſycamore, were chiefly preferred for the main or permanent timber; beech was ſometimes introduced, but this article does not bear cutting, when put into the faces of ditches, ſo well as the foregoing. Inſtead of planting alternately, the different kinds were put in, in groupes; but I ſhould have remarked before, that great quantities of mountain-aſh, alder, birch, poplar, &c., were introduced in ſtrong bodies between the valuable plants, varying all the articles (except the oak, which was univerſal) according to the nature of the ſoil.

The order of planting may be eaſily underſtood from the following ſketch of four diviſions, which I ſhall ſuppoſe equal to four ſquare perches.



o, repreſents oak, two or three in a group.
a, ——— aſh, from three to ſix ditto.
s, ——— ſycamore, two or three ditto.

It is not at all neceſſary to be exact with reſpect to the inferior kinds planted in the intervals, as they are

to

to be cut away when they begin to interfere with the others; the more that are put in, the better. Sometimes Spaniſh cheſnut and wytch elm are conſidered among the valuable kinds, but for the former the ſoil muſt be good, and naturally wholeſome, which in thoſe ſituations we ſeldom meet. Aſh is always put in plentifully, becauſe it is a good article for ſale whilſt young.

The general breadth of thoſe ſmall ditches is three feet and a half, and the depth from eighteen inches to two feet, and they are made for 4*d.* a perch, being equal to 5*l.* 6*s.* 8*d.* an acre. The ſurface of the gripe is ſtripped, and laid under the quick, with the ſward downwards; the remaining good ſoil is caſt over the ſward, part under, and part over the quick. This might be performed in autumn, and the ditches may be finiſhed in the courſe of the ſeaſon. The ſtronger the plants are, the better, as, when cut, the ſtronger they will ſhoot; I often planted them ſo thick as a walking-ſtick. They ſhould be cut before they are put in, but it is neceſſary to go over them again, after the ditch is finiſhed, to dreſs and ſmooth off any wounds, that they might have received during the operation. The faces of thoſe ditches are always fronting the eaſt as much as poſſible, in order that the bank may afford the more ſhelter. The banks are always ſown with broom-ſeed, broad-caſt.

This mode may appear to be expenſive, but I ſhall preſently ſhew to the contrary.

It is about ten years ago ſince this ſyſtem was firſt introduced, and ſince that time there have been upwards of one hundred acres planted, according to it. From part of the early planting, one thouſand of the inferior trees per acre have been cut away, which ſold for 8*l.* 6*s.* 8*d.* for the purpoſe of ſhovel and fork handles, which is only valuing them at two-pence each, clear of all expence, but they frequently ſell conſiderably higher; good ones ſell at four-pence each. But the profit does not end here, as the future growth of the timber, thus diſpoſed of, will for ſeveral years anſwer many purpoſes, ſuch as turf-creels, &c., for which there is always a great demand. But the thinning of the aſh will, in a ſhort time, bring more than double the above.

It is now clearly underſtood, and I am ſure that I am under the mark, when I ſay, that, in fifteen years, each acre will return 20*l.*, and this by cutting away only ſuch inferior ſtuff, as would, if ſuffered to remain, irrecoverably deſtroy the principal timber, which, of courſe, will require thinning in its turn, but not till conſiderable profit may be made of it.

In ſhort, this is the moſt profitable ſyſtem for mountain planting I know of; and its effects, as being picturesque, are already fully demonſtrated here. Such planting aſſumes a fuller appearance in five years, than any other ſpecies of planting, in ſimilar ſoils and ſituations, would have done in ſeven or eight years.

At

At the time this practice was begun, the idea of planting the closets or intervals was out of the question, the soil in general being so wretchedly bad; but two or three years made a wonderful alteration in it for the better; and every year, in proportion as the shelter is encreasing, and the drainage effected by the small ditches operating, the soil is becoming better and better; so that those closets are filled up from time to time with more valuable timber, such as larch and beech, and sometimes Scotch fir, to enliven the scene, and afford some variety for a few years.

It would be an endless performance to enumerate the different secondary modes of planting made use of here, as many of them differ very little from such as are practised in other parts. My chief object was to point out some of the most difficult undertakings, in order to shew what industry and perseverance may accomplish, and that in a few years. But before I take leave of this subject, I beg leave to lay before the reader the method followed with respect to an oak wood, which had been partly on the decline, and, of course, was cut down some years ago.

SECT. 5. *An account of the management of an Oak wood, which had been for many years on the decline, prior to the year* 1792, *at which period the following ſcheme was commenced.*

BETWEEN ninety and a hundred acres of ſtraggling oak woods about ten years ago exhibited a miſerable picture, being by far the greater part ſo far decayed, that the bark could not be ſtripped off in ſummer at the uſual time of cutting down oak; ſo that it was a matter of indifference what ſeaſon the trees were cut down at, ſince no profit of any account reſulted from the bark.

There were various opinions and conjectures, previous to the cutting down; it was almoſt univerſally agreed, that, ſince the oak had given *up*, no new ſpecies would ſucceed, the ſoil being ſo dry and exhauſted, and that it was better to let the oak continue in the ſtate it was, to linger out its exiſtence. Theſe futile advices were laid aſide, from the well known laws of nature, as it is a fact, that requires but little demonſtration to prove, that every plant is capable of ſearching for juices moſt congenial to its own ſupport. It is a very weak argument to advance, that, becauſe the oak declined, other plants ſhould not ſucceed; the former had abſorbed all the nouriſhment from the ſoil,

ſoil, that was congenial to itſelf, but left ample allowance of other juices ſuited to different kinds of foreſt-trees, which, ſince the above period, is fully evinced from the rapid growth and vigour of every article put out.

As the ſituation was very much expoſed to the weſt, ſhelter was a great object; on that account all the under-growth was preſerved, which conſiſted chiefly of heath and whortle-berry; but theſe articles being of a very humble growth, and only occurring partially, recourſe was had to another expedient to raiſe ſhelter, which was, not to plant for two ſeaſons after the oak had been cut down; that is, that there ſhould be two years growth of the ſuckers produced from the ſtools of the oak ſo cut, which, in general, afforded ſufficient ſhelter.

Larch, beech, and Scotch fir, were the chief articles put out, as the ſoil is of a dry hard nature; but at preſent a great number of the latter are cutting away from the earlieſt planting, to give room to the larch and beech, which are going on moſt vigorouſly. Indeed, contrary to expectation, many of the oak, cut down, are out-topping every other kind; theſe, of courſe, are encouraged, and ſuffered to enjoy their birth-right.

From a deſire of not making thoſe tracts too naked of a ſudden, at the time of the general cutting, many trees were ſuffered to remain, where there was any appearance

appearance of health; but ſince, this practice has been found not to anſwer fully the end it was intended for; the trees ſo left made but very little progreſs, and the early planting, even in the ſpace of ten years, has already overwhelmed them; and now, when it is abſolutely neceſſary to cut them down, there is a great difficulty in getting them through the young plantations; ſo that, on the whole, it is much better to cut down all the oak *ſmack-ſmooth* the firſt day (which mode is put in practice here of late years), unleſs ſome particular reaſons demand the contrary.

The holes were always made immediately before the planting took place, as the ſoil was ſo ſcanty, that, by making them any length of time prior to the planting, it would be found much reduced by the weather, and, from its nature, would receive but little benefit from the influence of froſt. Indeed, of late years, the mode, that is uſually followed in ſuch ſituations, is, to have two men making the hole, chopping the whole of its contents within itſelf; two more follow planting, and ſcooping the mould towards the edge of the hole, ſo as to leave a ſufficient cavity to receive the roots of the plant. By this means, not a particle of the mould eſcapes through the heath and other ſpontaneous growths. The ſurface and under-ſtratum of the holes are incorporated together; and, if the ſeaſon ſhould prove very dry, the ſurface of the hole is *mulched* with

with moſs, which is always found in great plenty upon the ſpot.

It is needleſs to obſerve here, that planting very young muſt be preferred; and that cloſe attention muſt be paid for a few years to the plants, till they get the aſcendancy of the native growth; ſpring planting is alſo found to ſucceed beſt.

Perhaps in this place it may be acceptable, to relate a circumſtance relative to the application of lime on the ſtumps of oak-trees, immediately after being cut down.

Since the year 1794, the following practice has been invariably attended to with ſucceſs, ſo far as time has proved the reſult. I ſhall only mention one ſubject, which may ſerve for the reſt.

In ſpring 1794, a ſtool, or group of oak, conſiſting of five ſtems, all of which were ſo far decayed, that there was no chance of the bark ſtripping, had they been left uncut till ſummer, at the uſual time of taking off the bark, were cut quite cloſe to the ſurface, or ſo near it as the old ſtock could bear the operation. One gallon of lime, quite freſh (being a few minutes before ſlacked), was uſed for the five trees; it was ſcattered over the ſurface of the ſtumps, and a few inches round their edges; the whole was immediately covered over with ſods, keeping the ſward part uppermoſt.

The ſhoots, which were produced the ſummer following, were the moſt vigorous I ever ſaw, even from ſtocks

ſhocks in full vigour and prime of life. Nor were they produced about the edge of the ſtump, as is uſual in common caſes, but at ſome diſtance from it. The ſhoots alſo were produced conſiderably fewer where the lime had been uſed, than where it had not, and, of courſe, they grew more vigorouſly.

It appears from this experiment, that the ſmall portion of ſap, which remained in the roots and ſtock, was effectually ſcared up, and prevented from being exhaled at the natural time of flowing; as from the moiſture the lime ſoon became incruſted, and acted as a kind of cement, and, of courſe, prevented ſuckers or young ſhoots from being produced, at or near the edges of the ſtumps, which is moſt common, as already obſerved.

I mention this for the information of thoſe, who may be concerned in the management of decayed woods; a circumſtance, which has been fairly proved very well worth attending to. The five ſtems only took one gallon of lime; a barrel of forty-two gallons (the ſtandard) would go over, by this proportion, 210 trees; an allowance of timber in moſt caſes ſufficient for a plantation acre.

Moſs, or any other moiſt covering, that may not be blown off by the wind, will anſwer as well as ſods; and, if none are convenient, any mould will do; but, at all events, the lime muſt be covered, and kept ſo.

SECT.

SECT. 6. *Of the advantage of ſowing potatoes, as a preparative to aſſiſt the ſpeedy growth of Plantations, and alſo, for the moſt effectual mode of laying down bad lands to the greateſt perfection.*

BRINGING in land by ſowing potatoes thereon, has been purſued here for many years back, with great advantage and benefit, both to the proprietor, and to the individuals who derive under him.

Within the laſt fifteen or ſixteen years, prior to 1802, upwards of 150 acres have been ſown with potatoes, chiefly by the labourers of the demeſne; perhaps fifty of the above number of acres were planted, and the remainder laid down.

In the former caſe it is uſual to plant firſt, and to ſow potatoes immediately after, the ſame year, in order that the trees may gain time. The firſt ſeaſon, it rarely happens that the ſoils are ſufficiently looſe and meliorated, to admit of ſetting the potatoes in drills; therefore the common bed-faſhion is adopted; but, inſtead of making the furrows ſtraight, they are frequently curved, ſo as to avoid the trees, and that they may always be ſecured within the ridge, the better to have the full benefit of the moiſture, and reap every poſſible advantage from the good ſoil.

In

In this place it is rather unneceſſary to remark, that the plants muſt be of a tolerable ſize at the time of planting them out, otherwiſe the potatoe ſtalks would overwhelm them. I ſhall only obſerve, that the trees, when put out, are not leſs than three feet in height, and that very few of the pine kind are planted in thoſe caſes, except larch, which is not ſo ſubject to ſuffer in the foliage as the other ſpecies are.

The ſecond, and ſometimes the third and fourth years, it is uſual to drill out potatoes, in the ſame ſoil where they have been bedded or ridged out the firſt ſeaſon; nor is it uncommon to have a crop of turnips the laſt ſeaſon, which generally ſucceeds very well.

It is needleſs to remark how rapidly plantations, thus managed, get on; but this ſyſtem muſt be confined to particular ſituations; in expoſed ones it cannot be put into practice, as, by keeping the ſoil looſe for ſuch a length of time, it could not be friendly to young plantations, from what they muſt ſuffer by ſtorms. In ſtrong abiding ſoils, not much expoſed, this mode can only be introduced to advantage.

In the ſecond caſe, or that of preparing land for laying down by ſowing potatoes, experience has fully evinced the great advantage of it in this demeſne, and eſpecially on coarſe, boggy, and marſhy ſoils, where this mode of preparing them for laying down is generally and ſucceſsfully followed.

The

The uſual mode is this. After the ſuperabundant water and ſprings (if any) are cut off, a certain portion of the ſurface is burned, to aſſiſt in the manuring for potatoes; indeed very often the crop entirely depends upon the quantity of aſhes ſo procured, without any aſſiſtance from other manures, and generally very plentiful crops are produced the firſt ſeaſon. Two ſucceeding crops of potatoes are always taken off; the ſecond crop is generally drilled, and, of courſe, a ſmall portion of manure ſerves; but this manure is commonly compoſed of rich mould and dung; aſhes being ſeldom uſed the ſecond ſeaſon, and eſpecially where they have been uſed the preceding year, as it is well known they are too exhauſting upon ſoils, if copiouſly applied, from the great propenſity they have of abſorbing the native oil from the ſoil.

Oats is the uſual crop to lay down with, with plenty of hay-ſeeds, chiefly of the *white meadow* kinds, which are found to thrive beſt, and laſt longeſt, in moſt of thoſe ſoils.

For the firſt crop of potatoes the labourers are not charged, but for the ſecond crop they pay at the rate of forty ſhillings an acre. The crop of oats the third year is worth 4*l.* an acre, clear of all expence; ſo that this brings a yearly profit to the proprietor, during the operation, of thirty ſhillings annually, allowing an annual rent of ten ſhillings an acre for the original value of the land, had it not been brought into a courſe of culture

culture at all, which, indeed, is rather highly rated. Lands of this description, after being laid down, let from two to four guineas an acre for meadow.

In neighbourhoods thickly inhabited, as this is, there can be no doubt of being able to procure people sufficiently numerous to sow potatoes every season upon a large scale; and had this mode been adopted twenty years ago, about the time of the commencement of laying down the grounds, many pounds would have been saved to Lord Mountjoy.

In lands of the foregoing description, this mode is the cheapest, and most effectual to bring them into a profitable state. Even in the very best soils, I am confident that the taking off two successive crops of potatoes will always be found the best economy, both for the proprietor, and the community at large. If this system was fully and universally established, there could scarcely be any danger of the poor suffering, or experiencing the like distress they underwent in the years 1800, and 1801; nor could the country be overstocked with potatoes at any time, if the feeding of cattle with them were more universally adopted. If the poor man had six or eight barrels of potatoes to spare, from the stock generally allowed for his family, how better could they be applied, than for the support of his cow, and especially in those parts, where fodder is most commonly very scarce?

SECT.

SECT. 7. *A description of the management of the banks of the river at Rash, so far as it accompanies the demesne, an extent, including all its windings, of nearly two miles and a half.*

SEVERAL years ago this weighty business was undertaken; as it was foreseen that, unless the impediments, which obstructed the regular course of the water, were removed, the beauty of the river would be in a great measure lost, and the principal parts of the adjacent grounds soured, and rendered almost useless, from the long continuance of the back-water, which, by reason of the high banks along the river, could not escape, or fall back into the bed of the river, when the water fell, or partly subsided therein.

The first point most necessary to consider was, how to dispose of those banks, or *lips*, to the best advantage, which almost accompanied the river through the demesne, and always near, and parallel to it.

Where the ground happened to lie hollow, or low behind the *lip*, there was no difficulty in disposing of the stuff to advantage, as it was either wheeled or carted back, so as to make the general fall to the river as abrupt as the nature of the place could admit of, in order to prevent the like accumulation of sand for the time to come. But, previous to the taking away those banks,

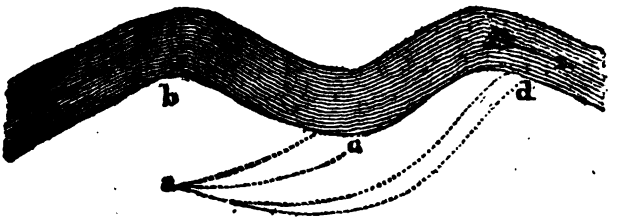
banks, the good ſoil or ſurface of the parts, on which they were intended to be laid, was taken off, and reſerved for a top-dreſſing for the whole, when brought to the intended ſhape. This precaution was the more neceſſary, ſince thoſe banks were principally compoſed of barren ſands, and of themſelves not capable of ſupporting any agreeable verdure.

In moſt caſes the grounds lie very flat behind the banks to a conſiderable extent, what in theſe parts are termed holmy lands. Thoſe *flats* or holmes being naturally extremely fertile, the covering of them with the barren banks was of courſe given up; therefore the barren ſtuff was in general caſt into the river, or buried in ſome adjacent pits or hollows.

In order to render the ſoil wholeſome, where the flats, and, in ſome places, concaves prevailed, and eſpecially when ſituated at a conſiderable diſtance from the river, recourſe was had to another expedient, beſides that of cutting away the banks, and ſloping them down to the water at low-water-mark; ſince, in ſuch caſes, the caſting of the bank, &c. could only be of uſe, ſo far as that operation could be applied, to cauſe the water to run off freely when the bed of the river ſubſided, and alſo to prevent the accumulation of the ſand in future.

The

The method is ſimply thus.



a, The loweſt point of the holm, at a conſiderable diſtance from the river, ſuppoſe a hundred yards. This point may be lower than the point *b*, in the river at low-water-mark; but it may be conſiderably higher than the point *c*, a conſiderable way down the river, ſuppoſe three feet. Now, if the ground be excavated from *c*, to *a*, making the excavation ſhallower and ſhallower as you approach *a*, where it ſhould riſe out to the ſurface, it is plain, that the whole of that quarter will be laid dry when the river falls, or arrives at low-water-mark. In ſinking about three feet at *c*, the breadth of the excavation is about twelve feet, and brought to a point at *a*. The ſection of the part excavated will appear thus, which has no bad effect when

ſwarded over, nor can it be perceived without a cloſe inſpection. Several of the foregoing contrivances have been introduced at Raſh, none of which has been ever found to fail.

The back, or ſtagnated water, is the beſt guide to point out the courſe for introducing the excavations or diſcharges into the river; it has, however, been often found neceſſary to attend to accurate levels along the banks: for inſtance, if the fall from *b*, to *c*, was found inconſiderable, it might be encreaſed, by letting the end of the excavation fall into the river at *d*, inſtead of at *c*.

It is plain that, when the water ſubſides in the river, the waters of the flats and plains will fall into the excavations, and from thence be immediately carried into the river, and all behind laid perfectly dry in a few hours, which has been invariably the caſe here for many years back.

This work is always performed in the ſpring ſeaſon, in order that the ſurface may be completely ſwarded over, before the autumnal rains ſet in. With reſpect to ſwarding, or creating a new ſurface for thoſe excavations, the beſt mode by far is, to make uſe of the old ſurface; but, inſtead of laying it on in regular uniform ſods, it ſhould be chopped into a number of ſmall pieces, and firmly beaten together by the back of the ſpade. Experience has, on many occaſions here of making new ſurfaces, ſhewn the ſuperiority of this practice over all others, in point of ſtability and firm texture; but it ſhould be attended to early in the ſeaſon, otherwiſe it cannot ſucceed; beſides, the old ſurface goes further when thus treated. The excavations,

above

above alluded to, have in general been ſwarded from the ſpace or old ſurface cut away, where the excavation was to be introduced; though the area of the latter muſt, of courſe, be conſiderably the greateſt.

It is well underſtood in this neighbourhood, that, ſince the banks of the river have been diſpoſed of, and the excavations, &c. perfected, little or no injury has been ſuſtained, and that the good effects reſulting from it have been experienced ſo far up the river as the town of Omagh; but this requires no demonſtration; the impediments, which were formerly the cauſe of the contraction of the water, being removed, the lands up the river, for a conſiderable way, muſt, of courſe, benefit thereby, ſince the water, in its progreſs thro' the demeſne, meets no oppoſition.

Had the banks of the river, from the ſtone-bridge, which terminates the river on the north, to Newtown-ſtewart, been low, no doubt but the adjacent lands muſt have ſuffered by the ſudden influx, which was occaſioned by removing all impediments through the demeſne; but they are quite the reverſe; they are bold and permanent, and bid defiance to any encroachments or impreſſions the water can poſſibly make.

The foregoing part of this work coſt upwards of one thouſand pounds; it was almoſt all performed by taſk or piece-work, of which regular accounts have been kept, as well as of all other ſpecies of taſk-work,

ſince the year 1790, prior to which the various kinds of piece-works have not been brought under regular or diſtinct heads, though vaſt ſums had been expended; but the real ſpirit of working by taſk did not commence till about the above period. To all parties concerned, every day's experience fully demonſtrates the great advantages taſk-work has over common day's labour, which ſhall be fully explained in another place. But to return.

Wheeling or carting from forty to ſixty yards diſtance; the price by the ſolid yard is generally from 2*d.* to 3*d.*, and ſo on in proportion. When the ſtuff was caſt into the river, or immediately diſpoſed of upon the ſpot, the price was uſually fixed by the running perch, commonly from 5*s.* to 10*s.* according to the dimenſions of the bank or lip, which in many parts exceeds ſix feet in height above the plane or general level, the baſe being from fifteen to thirty feet, tapering to a point; but the part of the bank next the river is generally the moſt abrupt.

But the great expence did not end here. Vaſt gullies, and breaches in the edges of the river, remained to be ſecured, many of which were of ſuch magnitude, as to require a very ſtrong barrier.

Large creels or kiſhes, made of oak and hazel, were generally made choice of; theſe were commonly ſix feet long, four feet wide, and from three to five feet deep, according to circumſtances; and in many parts

two

two creels, perhaps five feet deep each, were let down by a kind of lever, one placed over the other, both being filled with ſtones after being ſecurely fixed at front by a ſtrong row of oaken piles, placed within about a foot of each other; the length of the piles generally from ſix to twelve feet, and ſometimes more, according to the depth of the water. The piles are bound together by ſtrong hazel wattles. The bark was previouſly ſtripped off the piles, not altogether on account of the profit to be made of it, but upon a preſumption that they would laſt longer, which indeed proves the conjecture to be well founded.

The work is completed by ſloping the bank down to the piles, taking great precaution in introducing tough ſods, or ſuch as beſt agree with water, and that are leaſt ſubject to be waſted by the frequent agitation of the waves, at or near low-water-mark; a circumſtance, which cannot be too well attended to, being the preciſe medium, at which the banks of rivers and lakes ſuffer moſt; as banks, when ſecurely formed, and well ſloped, ſeldom or ever ſuffer by *flood-water*. The common ſedge, or reed-graſs, is admirably well calculated to ſecure the banks; on many parts of the banks of the Mourne river (which is the general name) it grows ſpontaneouſly; and, where it fully eſtabliſhes itſelf, it generally ſuperſedes all other precautions in point of ſecurity. Here great induſtry is uſed to introduce the reed-graſs, which has hitherto ſucceeded; it is cut into large

large ſods in ſome remote parts of the demeſne, or wherever it can be procured, and placed behind the piles; and in many inſtances it is found to ſucceed without any further aſſiſtance; but this muſt be underſtood only of thoſe parts, where the water has no power of making much impreſſion. Many other plants are well adapted to ſecure againſt the incurſions of water, ſuch as the flote-graſs, and the creeping bent-graſs. Ruſhes and ſprits make a ſtrong and permanent ſecurity to banks, but in a fine ſcene they ſhould not be introduced, but, upon the other hand, ſhould be moſt induſtriouſly extirpated. Fortunately the banks of the beautiful river, which paſſes through this demeſne, are not much encumbered with any diſagreeable plants of the native growth. Where the banks are principally compoſed of barren ſand, the *largeſt* ſpecies of the native *colt's-foot* has eſtabliſhed itſelf, which is a moſt fortunate circumſtance, as the roots are ſo extremely well calculated to bind the ſand, and the great ſize of the leaves effectually conceals it in the ſummer ſeaſon.

It is ſcarcely neceſſary in this place to remark, that the diſpoſing of the banks, and the creeling, piling, &c. went on at one time, ſince the ſecuring of the verges in a great meaſure depended upon that mode; for, in moſt caſes, had the banks or lips been firſt taken away, or otherwiſe diſpoſed of, in one ſummer ſeaſon, and the piling, &c. introduced the ſummer ſeaſon following,

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the verges of the river would ſuffer conſiderably in the intervening winter. At the commencement of thoſe operations, part of the work ſuffered materially by not attending to the above precautions; this diſaſter, however, ſerved one good end, namely, not to truſt in future to the mercy of floods.

It is plain, that this buſineſs altogether muſt be attended with great expence. The making of the *water-creels*, at 1*s.* each, is equal to about 3*s.* 6*d.* a perch for creeling only, beſides the expence of cutting and drawing the ſtuff. The number of piles, neceſſary to ſecure a perch in length, would ſell for 8*s.* for cabin-building, &c.; ſo that, conſidering the expence of drawing ſtones, ſetting the creels and piles, ſloping and ſodding the banks, &c., the whole cannot be rated at leſs than one guinea a running perch, beſides the original coſt of diſpoſing of the banks. Setting the creels, driving the piles, and ſloping and ſodding the verges, are always performed by day's work, as it would be found difficult to fix a price by piece-work; and beſides, too much care cannot be taken in thoſe operations, ſo that, even if they could be accurately ſettled by taſk-work, it ſhould by all means be avoided, as the leaſt miſtake or hurry might be productive of a great deal of miſchief; and there is never any temptation of doing any work, when performed by day-labour, in a ſlovenly or bad manner. Yet, notwithſtanding, taſk or piece-work ſhould always be preferred to day-labour, where there

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is any poſſibility of ſettling the price with accuracy, or that there be no hazard in performing the work in a ſlovenly manner, without being eaſily detected. It requires a long and intimate acquaintance with country works, to be able accurately to inveſtigate the various prices and rates of taſk-work, which muſt in a great meaſure depend upon the rates of common day-labour, being the beſt guide to go by.

So much for the weighty works of the banks of the river, which required to be managed, as above ſtated, in a moſt permanent manner. Thoſe parts, which were moſt likely to ſuffer, were always firſt attended to.

But as to ſuch parts as were not ſuffering materially, ſlighter materials were found ſufficient to ſecure them. Spruce and Scotch firs, from ſix to twelve feet high, were found to anſwer this purpoſe extremely well. Theſe were cut down with their entire branches, and packed together, as cloſe as they could be placed, in the parts of the banks diſpoſed to yield only ſlightly, or where ſtrand-like appearances were about to take place. In ſuch caſes there is nothing more neceſſary, than to arreſt the ſands and other materials, which may be brought down the river by floods.

The ſtrand or naked parts being judiciouſly covered with bruſh-wood of any ſort (full of foliage, for the cloſer the better), and ſecurely confined, a new ſurface is ſoon created. A few floods are ſufficient to depoſit

plenty

plenty of ſand, &c. to form the new-made ſoil; after which there is no further trouble than that of planting plenty of ſedge or reed-graſs, and other aquatic plants, which are ſoon formed into a firm agreeable ſward.

To enumerate the various expedients made uſe of in common caſes, or where great exertions were not found neceſſary to ſecure the banks, would be endleſs. The ſimple circumſtance of finding ſand, and other productions after floods, detained on the banks by ſome ſlight cauſe, ſuch as tufts of broom or furze, or, perhaps, rank graſs or weeds, was the firſt indication, no doubt, to adopt ſimple means, which moſt commonly ſucceed beſt.

The great ſecret in this buſineſs is, to contrive means to collect the ſand, &c. by the foliage of the bruſh-wood, and, when ſo collected, to prevent it from eſcaping into the river at the time of the ebbing or return of the water into its uſual channel.

Since ſo much depends upon the bruſh-wood and branches being as rich in foliage as poſſible, the ſummer months anſwer beſt for all works of this nature; not only on this account, but becauſe at that ſeaſon labourers make greater progreſs than at any other ſeaſon, ſince ſometimes they muſt get into the water.

The common mode is to make a ſlight hedge of *ſtake and rice*, along the edge of the water at low-water-mark; it is of no conſequence of what ſpecies of wood the ſtakes are compoſed, but the bruſh-wood, which forms

forms the *rice*, or that part woven through the ſtakes, ſhould be very cloſe; fir-branches of any ſort, broom, furze, or juniper, are very well calculated for this purpoſe. About eighteen inches is the uſual height of this ſimple barrier above the ſurface of the water at low-water-mark, as its uſe is only temporary to detain the ſand, becauſe the reed-graſs, and other water-plants placed behind it, ſoon penetrate through it, and join the water in the courſe of one or two ſeaſons, and overwhelm the *ſtake* and *rice* altogether.

The bare parts of the bank, behind the *ſtake* and *rice* hedge, are in general filled up with young trees of ſpruce and Scotch firs (the former is the beſt) of different lengths; theſe are cut down, for the purpoſe of thinning the young plantations, with their branches quite entire, and placed in the breaches of the banks, or where the water is diſpoſed to make any impreſſions, as cloſe as they can be packed together, inclining the tops ſomewhat in the direction of the water; theſe are laid down, and ſecured with any rough pieces of wood, which are in general about the thickneſs of the ſmall part of a man's leg. In order to ſecure theſe pieces firmly, hooked ſtakes are driven a conſiderable way into the bank, ſo that the hooked part of the ſtake may come in contact with the *leger* or rough piece, which binds down the bruſh-wood. In ſome caſes, where the breaches are not conſiderable, ſods and ſtones are uſed to ſecure the bruſh-wood from being carried

carried away by the floods; but this takes place only where bruſh-wood of any ſort may be thrown in indiſcriminately, and where the action of the water is not ſevere.

Whatever means may be uſed in ſecuring the bruſh-wood, they are of no further uſe after two or three conſiderable floods have taken place, as the quantity of ſand, &c., collected by that time, is moſt commonly ſufficient to do the buſineſs for ever after.

Roots of aquatic plants are always ſcattered plentifully on the bare parts, before the bruſh-wood is laid on, which ſoon vegetate, and make their way upwards through the bruſh-wood, and aſſiſt in a ſurpriſing manner to arreſt the ſand, &c. The common couch-graſs, ſo deſtructive to ſome cultivated land, is found to anſwer extremely well, when ſtrewed on the bare parts, before the bruſh-wood be laid on; many other plants, not merely aquatic, will anſwer the ſame purpoſe.

Several large pits, and aukward ſpots, have been filled from time to time, in the *holmy* grounds in the neighbourhood of the river, and made completely even and uniform with the circumjacent land, by ſimply throwing in bruſh-wood of any ſort, covered with a few ſods and ſtones, to prevent it from riſing, or being carried off by the floods.

At Raſh ſuch places are conſidered as receptacles, for the purpoſe of concealing the vaſt quantities of bruſh-wood, perpetually produced from the thinning of

of the young plantations; and, though large quantities are annually diſpoſed of otherwiſe, yet a great deal of the moſt inferior ſort remains for this purpoſe. Whenever the bruſh-wood becomes a nuiſance, it is diſpoſed of, as above ſtated; but the months of Auguſt and September are thoſe preferred for filling pits or hollow parts, on account of the autumnal floods prevailing at, or ſhortly after, thoſe times.

SECT. 8. *An Account of Taſk, or Piece-work, together with a compariſon between it and common Day Labour, with ſome remarks on labouring Tools and Implements.*

UNDER the head, *Wages*, &c., ſome remarks have been already made; but I could find nothing like a regular ſtandard throughout the county, by which any material knowledge might be obtained, except at Raſh, which here I ſhall briefly ſtate, and it may be depended on, as an accurate report.

At Raſh, where common labour rates at 8*d.* a day the year round, a ſhilling is conſidered a fair allowance to make for taſk-work upon the average of the whole year. In the winter ſeaſon a labourer generally makes as much by day's work as by taſk-work; but in ſummer there is no compariſon at all, that ſeaſon being ſo favourable to the latter. But with taſk-

task-work the labourers are always best pleased, and it is certainly most in favour of all concerned, so far as the nature of the work will bear it to be carried on in that manner.

Ditches of seven by five, that is, seven feet wide from the face of the bank to the verge of the gripe, and five feet deep perpendicularly, at from 2*s.* to 2*s.* 8*d.* the running perch of seven yards; ditches of six by four, from 1*s.* 6*d.* to 2*s.*; and so on in proportion. The dressing of the backs, and sodding the tops of the banks, are included in the prices of all ditches. The above dimensions, with respect to the breadth, are clear of the *scarcement* or off-set, which is commonly from six to twelve inches, according to the situation, or the nature of the soil.

Drains, in clay soils, from eighteen inches to two feet deep, at from 2*d.* to 3*d.* a perch; one halfpenny a perch is usually allowed for scattering the stuff on the surface, when they are intended to lie open for some time. When springs are in question, the prices, of course, must vary; for a given depth, suppose four feet, 6*d.* a perch is usually allowed, and, if further sinking be necessary, in order to intercept the springs, a second price is made; for an additional foot, after sinking four feet, 2½*d.* is added, 3*d.* for the next foot, and so on in proportion. When the depth necessary to sink, in order to intercept the water, cannot be ascertained at the commencement of the work, there is no

restraint

reſtraint laid upon the labourer, with reſpect to the breadth of the drain, ſince it is ſufficiently underſtood, that labourers can make more progreſs when allowed ſufficient room to work, than when confined in a narrow drain; beſides, ſuch drains cannot with propriety be finiſhed off the firſt ſeaſon. Filling in ſtones, in drains of all deſcriptions, is always done by day-work, a work which ſhould never be truſted to taſkers on any account, as one ſtone, awkwardly placed, might deſtroy the whole drain. This kind of work, too, is always performed by ſteady labourers. Bog-drains are generally at half the price of thoſe made on firm land.

Trenching.—Double trenching, *generally practiſed* for nurſery, at from 8*d.* to 1*s.* a ſquare perch.* This kind of trenching, when performed in lea-land, is done by paring the ſurface about two or three inches deep, and turning the ſward downwards, over which the remainder of the good ſoil is turned. The whole depth is generally from eight inches to one foot for ſeminary, but, when intended for nurſery, the depth is generally more, and, in ſhallow ſoils, a few inches of the ſubſtratum are turned up. The uſual mode, however, of preparing the ſoil for nurſery is, by ſowing potatoes twice, which is found by far the beſt economy.

* Though the Cunningham or Scotch meaſure is adopted in many parts of the county, and even in the neighbourhood of Raſh, yet, when I ſpeak of a ſquare perch, I always mean the plantation one, or forty-nine ſquare yards.

nomy. Trenching is always performed before the froſts ſet in, and raiſed in round ridges of about three feet. By adopting this mode, the ſoil receives the full benefit of the froſts, and beſides, ſlovenly or ſlight performances are more eaſily detected, than when the ground is trenched in the flat or level manner. Single trenching, for the purpoſe of levelling and ſmoothing the ſurface, in laying down grounds where the plough cannot act, at from 3*d.* to 6*d.* a ſquare perch.

Removing earth by the ſolid yard, or a cube equal to twenty-ſeven ſolid feet. This kind of work is always meaſured, before the earth be removed, and not after. Wheeling, from twenty to ſixty yards diſtance, from 2*d.* to 3*d.* a yard.

A great deal of boggy land has been covered or clayed here from time to time. A navigation wheel-barrow, well filled, will cover a ſquare yard to the depth of two inches. A ſolid yard, in this caſe, is rated at eighteen barrows, at nine ſlide-car-loads, and at three wheel-car-loads. The price by the perch, or by the acre, is always regulated by the depth of ſtuff laid on the bog, which here is generally four inches, and has amounted to from 8*l.* to 10*l.* an acre, according to the diſtance the ſtuff was wheeled or carted.

It requires a great deal of addreſs and accuracy to prevent fraud in carrying on ſuch works. The moſt certain mode is, firſt of all to ſmooth and level the bog, to be covered, effectually, a year or two previous to the

the covering; indeed the longer the better, in order to give the bog time to ſubſide, and to acquire a vegetable ſurface of ſome ſort, to prevent the hard materials from ſinking. When the bog is brought to the wiſhed-for ſhape for laying on the clay or gravel (the latter is certainly the beſt, and the coarſer the better), a number of ſtakes are put down in parallel lines, at about ten feet apart, or nearer (for accuracy, the cloſer the better), leaving only four inches of them to appear above the ſurface; the covering ſtuff is then laid on, to be equal to the tops of the ſtakes. It is eaſy to examine the ſtakes after the ſoil is laid on, where any ſuſpicion may ariſe; but, as it is ſo eaſily detected, there is ſeldom any advantage taken by the taſkers, and the more ſo, as a penalty is always inflicted where there is the leaſt appearance of fraud. I ſhould have remarked before, that the white meadow graſs is ſown in large quantities on the bogs, after being levelled, and previous to the laying on of the clay or gravel, which ſeldom fails to produce a permanent and ſtrong ſurface, capable of preventing the hard materials from ſinking.

To enumerate the different works, carried on by taſk throughout the demeſne of Raſh and its environs, would ſwell this article far beyond my preſent plan; I ſhall, therefore, only give a general hint how to aſcertain a reaſonable price.

It

It has been already obſerved, that the prices of taſk-work muſt be governed by thoſe of common day-labour. Old eſtabliſhed rules, ſuch as the prices of ditches, drains, &c. are eaſily aſcertained from long habit and experience; but it is not eaſy to determine the value, which ſhould be fixed for many other works, which may occur in an extenſive improvement, and it requires both ingenuity and addreſs to be able to deal fairly with labourers, who are in general very keen with reſpect to the making of bargains favourable to their own views.

In order to ſettle any doubts, which may ariſe with reſpect to the fair value to be given for any job of taſk-work, which at firſt view may be found difficult to determine, the labourer ſhould be kept ignorant of the mode of payment; that is, whether by day-labour, or by taſk-work. A few days, or perhaps a few hours, may determine what may be thought a reaſonable price by taſk-work. It is needleſs to remark here, how very neceſſary it is to have a truſty confidential perſon to ſuperintend any buſineſs of this nature, and eſpecially at the commencement of it. If labourers are kept ignorant, during the whole time of executing any job of work, of the manner in which they are to be paid, they will, of courſe, work diligently, becauſe, if the payment ſhould be made in conſideration of taſk-work, without working diligently they would in the end find themſelves much diſappointed. It is, however, by far

the beſt mode for all concerned, to determine the price as ſoon as may be convenient, by which the labourer will undertake his work at once with ſpirit and alacrity, and the employer will be certain of having his work done expeditiouſly.

I have often aſcertained the object of my wiſhes, by placing a ſteady labourer, for a few hours *only*, at a job of labouring work, the fair price of which at firſt view appeared doubtful. A perſon may take out his watch after he turns his back to a labourer, walk away, and return again at a certain time, and thus be able to calculate the fair price, that ſhould be given.

To enable taſk-labourers to carry on different kinds of work with eaſe and facility, ſomething better than the common ſpade and ſhovel, peculiar to the county, is allowed to them. Ten pounds a year go a great way in purchaſing drain-tools, navigation-ſhovels, pick-axes, caſting-ſcoops, &c. Without allowing labourers implements properly calculated for different kinds of taſk-work, complete execution cannot be expected.

Complete implements for labourers, uſually employed in taſk-work, are always in readineſs at Raſh, to be given out to them occaſionally; and, in order to prevent thoſe tools from being loſt, or otherwiſe diſpoſed of, ſevere fines are inflicted, generally double the value of the article; becauſe, if only the value of it was charged, the labourer would ſuffer nothing by ſelling it at the ſame price.

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In giving out implements to taſkers, the firſt point is, to charge them double value on the debt ſide of their account, which charge is taken off at the concluſion of the work, when the articles are delivered up unbroken, or without being damaged, otherwiſe than common wear, for which they are never charged; but if they break an article during the time they have it in charge, they muſt repair it at their own expence.

SECT. 9. *Manner of training up Boys, ſo as to become uſeful, ſteady Labourers, with a number of ways to employ them to the beſt advantage the year round. Alſo, ſeveral Modes, by which old Men, when partly paſt their labour, may be applied to advantage to themſelves and their Employers.*

A CONSIDERATION of the greateſt importance is, that of raiſing a race of uſeful perſons, at the commencement of every uſeful and extenſive improvement. At Raſh this precaution was early attended to, which ſince has been productive of many ſolid advantages, both to the proprietor, and the individuals themſelves.

Since, in all great undertakings, ſeminary and nurſery ſhould always precede *planting at large*, boys will be found very uſeful from the commencement; and, by the time the firſt courſe of ſeminary and nurſery may

be over (probably in five or six years), they will, of course, become very expert, and fit to engage in the general planting; and, as this business encreases, others, of course, will be coming forward. After serving so long a period in the infant part of the improvement, they will be found more useful than grown-up persons, picked up indiscriminately through the country at large. At least boys, thus trained, the writer knows, from long experience, to have uniformly turned out the best planters and ground-workers, having, by early habits, acquired a degree of smartness and activity, which they seldom depart from when grown up, or even in an advanced stage of life.

Perhaps in this place it may not be amiss to shew how to secure boys, so as to make them attend regularly to the works of a demesne, till they may become of more general use to themselves and to their employers. Unless some effectual method be taken, they will always wish to wander upon every trifling occasion, or any advantage they think may turn out in their favour.

The method followed at Rash I shall briefly state.

Boys, from ten to twelve years of age, are usually taken in from time to time. They remain two years at *4d.* a day; the third year they receive *5d*; the fourth, and sometimes not until the fifth year, the wages are advanced to *6d.*; and, in the course of a year or two after, they are raised to man's wages, or *8d.* a day.

When

When a lad is found to have an extraordinary ſhare of ability and ſmartneſs, one year of his time is given up, or, in other words, he is put on man's wages a year before the uſual time.

I am apt to believe, that a ſyſtem, which has been found to be of ſuch general uſe by the ever to be regretted the late Lord Mountjoy, will not eaſily be forgotten by his ſucceſſor; nor do I in the leaſt deſpair of finding it become general throughout our extenſive improvements in the kingdom at large.

It is eaſy to conceive, that the certainty of having the wages raiſed, at fixed periods, induces the boys to ſerve out their reſpective times. If, however, it ſhould ſo happen, that a lad, through tricks, or other motives, ſuch as going to ſervice to a farmer, or the like, and if, after ſome time, he ſhould change his mind, and wiſh to return again to join his work, in this caſe he muſt begin again, as if he never had been entered at all, though the tranſgreſſion ſhould be committed the laſt year previous to his being entitled to man's wages; thus few deſertions ever take place.

Upon the other hand, if any perſon, either young or old, at *Raſh*, ſhould meet with any accident, when actually engaged in any of the works, his time is always allowed, as if he had been at work. *Raſh* is ſeldom without a great number of invalids; the great number of working people, together with their intrepidity, fully accounts for this circumſtance.

Here

Here is another great inducement held out; namely, ſome of the boys, through merit, deſerve higher wages than others. Dexterity in pruning, grafting, inoculating, making cuttings and layers, clipping hedges, with many other nice works, which naturally occur in ſuch an extenſive demeſne, are motives to give encouragement to the moſt deſerving. The aſpiring lads do, therefore, avail themſelves of ſuch opportunities as lie open to them. The moſt active will, of courſe, be firſt promoted to ſerve gentlemen as planters, &c.; the next claſs ſtep into the place of the firſt, and the third into that of the ſecond, and ſo on, ſtep by ſtep, to the loweſt boy. Thus, like the army, there is always a ſeries of promotions after the firſt takes place.

Here it may not be amiſs to point out the moſt likely ways of employing the boys to advantage the year round, ſince the caſe is not the ſame with them as with grown-up labourers, who may be ſet to many kinds of ſtock-jobs in all weathers; whereas with young lads there muſt be works laid out ſuited to their ſtrength and conſtitution, particularly in the winter months; otherwiſe they will not be found uſeful.

I ſhall now ſtate the principal works ſuited to boys, and particularly ſuch as occur at Raſh, and ſhall begin with the ſpring quarter, at which ſeaſon there never can be a loſs for uſeful employment for them.

The moſt aukward of the planting labourers are generally employed in making holes for trees; the moſt

expert of the boys are commonly engaged in planting them, for which purpoſe they are better calculated than labourers in general are, eſpecially where the ſoil is looſe, and the plants ſmall. The weakeſt of the boys anſwer to carry the plants about from place to place, and alſo to dreſs and ſettle the ground after the planters, to pick off ſtones, and to do other uſeful works. This claſs alſo, with an intelligent perſon over them as a *captain*, are extremely well calculated for bringing up the rere of the planting, by ſowing broom, furze, and laburnum-ſeeds for ſhelter.

In like manner they may be employed in planting out nurſeries. Indeed in that ſpecies of planting there are ſo many ways of performing it, that the weakeſt of them may be employed to as uſeful purpoſes as the ſtrongeſt.

When much planting is to be performed in one ſeaſon, which here is commonly the caſe, ſmall parties are formed, with an intelligent perſon at the head of each, and eſpecially when the ſeaſon's planting lies ſcattered and detached; but, when the work lies connected and compact, the reverſe is the general practice, in order to keep all as much as poſſible under the eye of the head planter; a ſyſtem which, in all caſes, let the work be what it may, ſhould be attended to as much as poſſible.

So much for the ſpring, and now for the ſummer quarter, which naturally points out the neceſſary works.

I believe

I believe I need not point out, that weeding and cleaning the plantations, nurſeries, ſeminaries, ditches, &c. muſt form the moſt eſſential parts of the ſummer works. For theſe works boys are extremely well calculated, ſince a boy, in ſuch caſes, may be found as uſeful as a man, and frequently more ſo.

The regulations, with reſpect to tools and implements, may probably, with ſome propriety, be introduced here, though ſome hints have already been given upon that head.

Each boy is furniſhed with a ſcuffler or puſhing-hoe, a weeding-knife, &c., which are numbered and charged to their reſpective accounts; otherwiſe thoſe articles could never be kept together with any degree of regularity. At the latter end of the ſeaſon, when the works of the nurſeries, &c. are over, the implements are put up, and the charge taken off the boys till the enſuing ſeaſon, when it commences again, and ſo on. But this ſyſtem is not confined to the planters alone; it is general in all other departments in the demeſne.

As the care and management of tools and implements in an extenſive demeſne is a matter of great conſequence, and one which the maſter of works ſhould be particularly attentive to, I ſhall throw out a few obſervations by way of advice.

The firſt thing to conſider is, to take an exact inventory of all the tools and implements in the place, ranging

ranging every article under its proper head; the charge of which ſhould be given to one perſon only, who ſhould be of a ſharp retentive turn. Every ſet of articles ſhould be numbered; for example, wheel-barrows No. 1, 2, 3, &c., and ſo on with all other articles. This will enable the perſon, who is in charge, to keep a regular account. Next, let that perſon charge the articles to thoſe, who may occupy them; not the real value, but the double of it, or, at leaſt, conſiderably above the value. This charge ſhould remain in force, till the articles are returned, whether broken or not. Wear and tear upon all articles cannot be avoided, nor is it fair to charge ſuch to the labourer's account; in ſome inſtances, however, according to contract, it is common and fair that taſkers ſhould return articles in the ſame order, in which they got them.

There ſhould be, of all kinds of tools and implements about a demeſne or place, ſome ſpare ones in readineſs, in order to ſupply the place of ſuch as may chance to be loſt or broken. Such need not be numbered, becauſe they only ſtand as ſubſtitutes, in caſe a repair only be neceſſary for the abſent article; but, if that article be loſt, the ſubſtitute ſhould be numbered agreeably to the number of the former. Thus regularity will be always kept up, and labourers and taſkers will meet with no interruption in the progreſs of their works.

A ſteady

A ſteady perſon, charged with the above kind of arrangement, is one of the moſt uſeful men that can be employed in a demeſne, or where much works are carrying on.

I believe I need not point out the great advantage there is in keeping all articles clean and dry, when laid up, or not in uſe. The oftener they are called in, and newly arranged, the better, as thereby there will be fewer miſtakes and loſſes.

The new implements, &c. ſhould always be kept ſeparate from the old ones, in diſtinct columns.

It is now full time to return, in order to point out the works of the autumn quarter.

The beginning of this quarter is uſually taken up in putting out evergreen ſhrubs, ſuch as laurel, Portugal laurel, lauruſtinus, &c., and, alſo, in planting cuttings of the ſame, and in many other articles, ſuch as cleaning hedges for the laſt time, when it ſo happens that two weedings are neceſſary in one ſeaſon.

But the greateſt point of all to attend to, ſhould be that of ſecuring young trees put out the laſt ſpring, particularly of the pine kind. This is the time to give the finiſhing ſtroke to every plant encumbered with graſs and weeds; becauſe, if ſuch ſpontaneous growth ſhould remain till too late in the ſeaſon, the rains and damps, which uſually take place at that time, rot the vegetable matter about the tender branches of the young plants, to their great detriment, and very often

to

to their total deſtruction. By not paying due attention to this particular, more plants ſuffer than by all other accidents put together, at leaſt in moiſt ſituations. Indeed this precaution is perhaps more neceſſary in Ireland, than in England or Scotland.

In ſuch caſes, the boys are furniſhed with ſmall hooks or ſickles, which are alſo numbered, and charged to them; and, upon ſuch occaſions, a boy is found of more uſe than a man.

In the latter part of the quarter, boys are employed to great advantage, in trenching ground, and digging nurſeries. In theſe works the weakeſt of them are placed at the lighteſt and eaſieſt parts. In the former, marking out the lines for the trenchers, and ſhovelling up the crumbling mould from the trenches, are works ſuitable to their ſtrength. In the latter, cleaning the rows of plants, before the diggers, is a kind of buſineſs, to which boys are well calculated. Thus, by a judicious diſtribution of the whole, no part can be uſeleſsly employed.

Collecting various kinds of ſeeds is peculiarly ſuited to boys, as their dexterity in climbing gives them the preference to men. Upon thoſe occaſions they are generally *taſked*; that is, each of them muſt produce a certain meaſure every evening, after the day's gathering, and continue the ſame allowance ſo long as the ſeeds continue plenty. But the uſual way is, to pay ſo much

much a meaſure, according to the ſpecies of ſeed; and ſome articles are paid for by weight, to prevent the impoſition of mixing leaves and ſtalks with the pure ſeeds. When the ſeeds are weighed, the boy is always a loſer by collecting leaves and ſtalks, ſince a meaſure of pure ſeeds will always weigh better than when adulterated. The meaſure of pure ſeeds, however, with reſpect to weight, is aſcertained at the beginning of the ſeaſon, which prevents any diſputes that may ariſe. Sixteen gallons is the uſual meaſure. In haws, when gathered clean, ſuch meaſure is commonly equal to eight ſtone and a half; aſh and ſycamore keys about ſix ſtone; and ſo on.

I have now accounted for three quarters of the year ſpent in uſeful works, to which I might add many more, but ſhall proceed to the laſt or winter quarter; in which, though boys may not be ſo uſefully employed as at other ſeaſons, yet, notwithſtanding, many works may be ſtruck out for them to uſeful purpoſes. In the beginning of the quarter, haws, holly-berries, ſpindle-tree, &c. are uſually collected. Joined with labourers, boys are uſefully employed in turning and forming compoſts; they break the clods, &c. and blend the parts together. In ſunſhine weather they may be employed in collecting ſtones off of lawns, and newly laid down grounds.

Boys are found extremely uſeful in collecting leaves in the woods and plantations. Even though the leaves

ſhould

ſhould be applied only to aſſiſt in making manure for potatoes, they, notwithſtanding, pay amply for the trouble attending them. Indeed there are few works boys can be better employed at on a cold winter's day, than collecting of leaves.

Boys are employed to a very good purpoſe, in bringing the prunings and loppings of trees to convenient places for cars to get at them conveniently.

Theſe are but few among the many works, that this little *army* are uſefully employed in; the nature of the place, and other circumſtances, always point out the moſt uſeful works to engage in.

By good management, there can be no doubt but boys may always be found uſeful; but, even if this ſhould not be exactly the caſe in winter, it is good policy to retain them under half-pay, or for ſome trifle, till the buſy ſeaſon, in order that they may not be altogether a burden to their parents, and that they may be at hand, and in readineſs, when there is a preſſing call, and not ſuffered to wander through the country, as, probably, it might not be eaſy to collect them again when moſt wanted.

There is ſcarcely a labourer now (1802) at Raſh, in any department, who was not formerly employed when a boy, and from one ſtage of pay advanced to another, till he arrived to man's wages; no wonder, therefore, that it ſhould have, within the laſt twenty years, (ending 1802), produced a great number of uſeful hands,

hands, probably more ſo than any other part of the United kingdom. Indeed many of them are planters, of no ſmall conſequence, to noblemen and gentlemen throughout the kingdom.

Some of the labourers, found at Raſh at the commencement of the improvements, are at this time old men.

Care has been taken, from time to time, to provide ſuch labourers with employments in the demeſne, ſuitable to their ſtrength and circumſtances. The following may ſerve to ſhew, how far this ſalutary object has been carried into execution, and alſo, what the late Lord Mountjoy's further intentions were, which, there is every reaſon to hope, will be perfected by his ſon, the preſent Lord Mountjoy.

Obſervations with reſpect to old Men and their families—the manner of employing them—with remarks on an hoſpital intended to be erected for their reception.

The preſent practice is, when a labourer drops off, ſo as not to be able to ſupport his uſual rank or ſtation among his fellow labourers, to place him at ſome ſlight work, ſuitable to his ſtrength and capacity. In general a yearly allowance is fixed, moſt commonly five or ſix pounds, with a cabin, and other privileges, ſuch as potatoe-

potatoe-land and turf, and, if he has a wife, a ſpot for flax, generally half a rood of land. There are ſome inſtances, however, of making it a daily allowance inſtead of a yearly one, the better to prevent impoſition, which, indeed, upon thoſe and many other occaſions, cannot be too much guarded againſt, ſince there is nothing more common, with thoſe invalids, than to repreſent their health to be much worſe than is really the caſe. In this caſe a charge is made of the privileges, and he gets credit for the time he works, either by the day, by the job, or piece-work, as the caſe may be.

When the invalid dies, if he ſhould leave a widow, which is moſt commonly the caſe, ſhe is taken care of alſo, by allowing her ſome portion of what her huſband enjoyed, indeed frequently the whole of it, and eſpecially if ſhe ſhould be encumbered with any charge, which often happens to be the caſe.

The following are only a few, among the various jobs invalids are generally employed at throughout Lord Mountjoy's improvements.

Lodge-keepers.

Preparing walks and drives, where ſlight repairs only are neceſſary; conducting water from them after ſudden rains, &c.

Making up billet-wood, &c. for fuel.

Cutting and preparing ſcollops for thatching.

Sweeping

Sweeping yards, &c.

Attending cattle, poultry, pigs, &c.

Weeding nurſeries, ditches, &c.

Collecting leaves for manure.

Picking and preparing potatoes for ſeed, and for food for cattle, &c.

Making various kinds of creels and baſkets.

Drawing ſtraw for thatching.

Turning and preparing dung and compoſt heaps.

Spreading dung for potatoes, &c. &c.

Old men are of great uſe on many occaſions; indeed I have known many of them to be more ſo than perſons in the meridian of life. The only point to attend to is, to ſet them to works ſuitable to their ſtrength and conſtitution, and they will always be found uſeful to themſelves, and to their employers and patrons.

Old men in general are fond of company. If two of them are placed together, they look upon themſelves to be well treated. They ſpend the day in talking over paſt times, and of their *great feats* when young men; yet all this will not prevent them from going on with their works in a ſlow but ſure manner.

In ſetting old men to work, many jobs ſhould not be laid out, or propoſed to them at one time, as in general they are forgetful. The beſt way to make the moſt of them is, to praiſe their performances, and find as little fault as poſſible, ſince they are in general tenacious

nacious of their own ways, and cannot bear the *ſpur*, which, on account of their age and infirmities, ſhould not be often applied.

The late Lord Mountjoy had no object more at heart, than that of eſtabliſhing an hoſpital upon a large ſcale for the accommodation of invalids, not only thoſe of the demeſne, but ſuch as were found proper objects throughout his extenſive eſtates in the counties of Tyrone and Donegal. His intention was to have it amply endowed, and divided into three principal heads or claſſes, namely;

1. For invalids, with their wives.

2. For invalids, without wives.

3. For widows of invalids, and other diſtreſſed objects.

Gardens to be annexed to the different departments, and to be cultivated, for the uſe of the whole, by ſuch of the invalids as were found able to work.

Flax and wool to be ſerved out to a certain proportion, to employ the women in ſpinning and knitting; with an annual allowance of clothing and fuel for the whole.

In this place I am happy to have it in my power to ſay, that his preſent Lordſhip appears fully determined to put this laudable plan into execution, with many others, which his memorable father had ſuggeſted.

FINIS.

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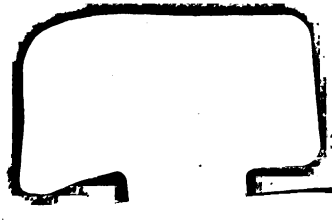
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